The Links between Public Tendencies and the Urban Design Framework of Brisbane's Public Squares

Mapping urban design frameworks present in Brisbane public squares and the correlating activities of the Australian public

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ABSTRACT: This research seeks to demonstrate the ways in which urban design factors, individually and in various well-considered arrangements, stimulate and encourage social activities in Brisbane's public squares through the mapping and analysis of user behaviour. No design factors contribute to public space in isolation, so the combinations of different design factors, contextual and social impacts as well as local climate are considered to be highly influential to the way in which Brisbane's public engages with public space. It is this local distinctiveness that this research seeks to ascertain. The research firstly pinpoints and consolidates the design factors identified and recommended in existing literature and then maps the identified factors as they are observed at case study sites in Brisbane. This is then set against observational mappings of the site's corresponding user activities and engagement. These mappings identify a number of patterns of behaviour; pertinently that "activated" areas of social gathering actively draw people in, and the busier a space is, both the frequency and duration of people lingering in the space increases. The study finds that simply providing respite from the urban environment (and/or weather conditions) does not adequately encourage social interaction and that people friendly design factors can instigate social activities which, if coexisting in a public space, can themselves draw in further users of the space. One of the primary conclusions drawn from these observations is that members of the public in Brisbane are both actively and passively social and often seek out locations where "people-watching" and being around other members of the public (both categorised as passive social activities) are facilitated and encouraged. Spaces that provide respite from the urban environment but that do not sufficiently accommodate social connections and activities are less favourable and are often left abandoned despite their comparable tranquillity and available space.

Keywords: Brisbane, Australia, city, urban, public space, Public Square, behaviour, tendencies, urban design, architecture, design, design framework, design factors, mapping

INTRODUCTION

Cities the world over have both private and public spaces. Private spaces, by their nature, can be highly personalised, bespoke environments for their individual inhabitants. Public spaces, on the other hand, and particularly those in dense urban locations, must cater to wide ranges of users.

Designers therefore must make judgements regarding appropriate public environments that both engage the public and also allow necessary activities to proceed uninhibited.

It is widely considered that in order for a designer to successfully respond to the needs and wants of the public when designing public space, each site must respond to the local climate, surrounding context, historical, social and cultural influences as well as the many constraints placed on contemporary public spaces in modern cities such as security and public safety measures.

Much has been written about the design factors that contribute to "good" public space. As history tells us, however, many of the clear design frameworks set out for public spaces in historical cities are no longer considered to be appropriate for contemporary urban spaces.

For instance, the art-centric ideals by designers for public spaces in the nineteenth century made no real reference to the users or their requirements but rather focused on aesthetic and compositional characteristics of the site (Sitte 1965; Jarvis 1980).

Alternatively, but still with great importance placed on aesthetic features, was the widely employed design framework for social control and conditioning, primarily utilised by authoritative figures such as rulers (Roeck 2004). This framework, unlike the art-centric approach, focused heavily on instilling particular ideals and values in the general public. This was achieved through methods of conditioning and control, such as using scale, ornamentation and geometry to place importance on central, civic and religious buildings (and subsequently, implied power and importance) (Roeck 2004).

Perhaps most pertinently for today's designers is the shift in urban design attitudes towards people friendly urban design (Jarvis 1980). These people friendly frameworks for design (including the works of Alexander 1964-1977; Carmona 2003; Crankshaw 2008; Gehl 1971; Jarvis 1980; Lynch 1960; Sternberg 2000; Tibbalds 2000 and Whyte 1980) all focus on the ways in which people can be encouraged to engage with and linger in spaces designed for gathering, socialising and observing urban life with factors such as the human scale, permeability and shelter from the elements.

These frameworks cannot, however, provide all-encompassing sets of rules for the design of public spaces everywhere. As mentioned, ultimately the most significant factors contributing to the use of public spaces are locally distinctive social, cultural and climatic influences (Gehl 1972; Lynch 1960).

Prominent research regarding the design of public space considers the occurrences of social activities to be the best indication of "successful" public space (Gehl 1971; Tibbalds 2000). Jan Gehl (1971) considers that to a certain extent, and within the confines of the external, contextual factors mentioned above, the frequency, duration and quality of social interactions can be influenced considerably by particular design factors employed by public spaces.

This research seeks to identify the design factors employed in Brisbane public squares and to map and analyse the correlations between widely accepted design factors and occurrences of social activities. This approach results in the identification of clear correlations between specific design factors and the public of Brisbane's engagement with them.

These results highlight a number of locally distinctive patterns of behaviour and the various levels of success that each of the identified design framework factors achieve in Brisbane's public spaces.

Firstly, the research finds that efforts to legitimise the significance of historically and culturally important sites through the use of rigid, formal design elements are often ignored and even detract from the practicality, comfort and attractiveness as a social or recreational destination.

The research finds that alternately, people friendly design factors facilitate and encourage inhabitants to linger longer in spaces in turn form clusters of populated and "activated" nodes for passive ("people-watching") and active socialisation.

These nodes of activity do not only attract people to participate in active socialisation (i.e. conversing), but also attract individuals and groups to the edges of the activated nodes for the purpose of being around (i.e. seeing and hearing) other people. These findings support those outlined by Gehl (1971) who regards this tendency of "passive socialisation" and as a particularly attractive prospect for many users of public space. Similarly, Crankshaw (2008) considers that this natural inclination of users of public space is attributed to the public space user's desire to be "immersed" in urban life.

This research finds that Brisbane's public has an overwhelming desire for social spaces and seek out activated areas, even when quiet, less populated spaces are available.

The various findings identified through this research have responded to this research's primary objective to demonstrate the ways in which Brisbane's urban design factors, individually and in combination with each other, stimulate and encourage users to engage with public space in a successful, social and locally distinctive way.

BACKGROUND

Public space is the common ground of a community. The essential counterpart to private spaces, such as homes and workplaces, public spaces provide the channels for human movement and nodes for communication, socialisation, relaxation and recreation (Carr 1992).

Ken Greenberg, in *The Would-be Science and Occasional Art of Making Public Spaces*, makes the distinction between "public space" and "open space". After WWII, American cities dramatically increased open space in order to improve the general environment of the urban centres, not to provide places for human social connection. These efforts were designed to increase distance between buildings, allowing better penetration of sunlight and vegetation (Greenberg 1990).

Art and composition of public spaces

The proliferation of ordered, gridded cities and public "squares" in nineteenth century America formed a particular hostility between designers and planners. Camillo Sitte notably objected to the rigid and formulaic planning of cities of the time in *City Planning According to Artistic Principles* (1965) with regard to his compositional ideas regarding how public space should be designed.

Sitte's principles were to provide beauty and artistic quality to spaces. A number of rules outlined in his book defined the way in which users should be positioned to admire both art and compositions of surrounding buildings (Sitte 1965; Jarvis 1980). Sitte's formulas for artistic (and therefore "successful") public spaces include that the "*centre of plazas to be kept free*" (Sitte 1965) and that "*the ideal street must form a completely enclosed unit*" (Sitte 1965, pp. 61).

Unlike the organic formation of public marketplaces of the historical Middle East or even

traffic routes forging through a modern-day city, the influential formula's validated by Sitte made almost no reference to the users of the space and how they affect and are affected by it (Jarvis 1980).

Similarly the works of Frederick Gibberd (1953) focused on the composition of cities in an exclusively aesthetic capacity (Jarvis 1980). In an essay, *The Design of Residential Areas*, Gibberd (1953) outlines the way in which city streets should be composed in order to create pleasant spaces, but with almost no reference to the activities that would take place in them (Jarvis 1980).

If nothing else, these design frameworks highlight the shortcomings of the prominent nineteenth century public design attitudes for modern public centres.

R.K. Jarvis, in *Urban Environments as Visual Art or as Social Settings?* (1980) categorised the afore-mentioned compositional approach to public space design as "art-centric" public space design. Whilst this design framework focused primarily on aesthetic qualities of spaces, Roeck's (2004) writings suggest that another design framework employs these same aesthetic frameworks for the passive "control" and conditioning of its public users.

Public space and social control

Well documented is the great effects architecture (and particularly art) had on pre-modern societies. The visual arts existed alone without the competition of other media such as those competing for spectators' attention today (Roeck 2004).

The civic and political power articulated through the language of art and architecture is significant, for instance they inform and enlighten spectators and even tortuously communicate "appropriate" patterns of behaviour, reinforcing concepts of justice and state order (Roeck 2004).

Bernd Roeck, in *Early Modern Architecture: Conditioning, Disciplining, and Social Control* (2004), outlined ways in which the language of buildings has historically contributed to social control (Roeck 2004).

Scale

Citizens were accustomed to their domestic architectural scale and thus the contrast between small and narrow spaces and the vast interiors of such buildings as cathedrals impressed them (Roeck 2004).

This form of building language has perhaps been diminished with the architectural technologies of today facilitating sky-scraping buildings that dwarf the neighbouring historical and civic architecture. Spectators today have different expectations of the scale and mass of urban architecture (Roeck 2004).

Likewise the scale of public outdoor space has been subjected to a change in societal expectations. The narrow alleyways of historical cities are now placed next to sprawling urban squares and boulevards (Roeck 2004).

Architects throughout history have considered these contrasts in scale. For example Leonhard Christoph Sturm, a German architectural theorist, recommended that neighbouring buildings to a landlord's estate be symmetrically placed but also scaled to appropriately and modestly boost the magnitude of the palace (Roeck 2004). It has long been acknowledged that greater scale constitutes power (Roeck 2004).

Vertical organisation

Vertical organisation also plays roles in spectator perception. For instance the views afforded by the elevated position of the landlord in his villa facilitated surveillance of his workers, while the workers themselves literally had to scale the topography or stairs to reach them. This physical and implied organisational structure forced an acceptance of authority and status (Roeck 2004).

Materials

Conditioning of the public has not just been restricted to scale; materials have also been used throughout history to improve spectators' perception of particular architectural spaces (Roeck 2004).

Beauty and ornamentation

Impressing onlookers may be considered a simplistic and superficial function of architecture. However, particularly historically, the more heavily ornamented and "beautiful" a building was the better chance it had of impressing spectators and even other rulers and nations (Roeck 2004).

Fame was often the very basis of a building's commissioning, intended to be seen as "*more distinct and attract more people who wish to visit them,*" as contemplated by Pierre Grégorie in 1609 (Roeck 2004, pp. 137-8).

Order and the ruler's intention

The intention of "beauty" was quite often one manifested in symmetry and clear geometric patterns. These principles ensured that architecture was viewed as part of the ruler's intention and thus the ruler's power was legitimised. For instance, primary streets were ordered to lead to the palace or religious buildings, authenticating their power – the planned city illustrated not only the central ideals that were intended for the people (conditioning citizens to consider imperial, civic and religious ideologies as central to society) but also the ruler's power and ability to regulate. As Roeck argues, "*the straight line displayed power*" (Roeck 2004, pp. 138).

In these ways, historical cities have often been considered to communicate strong cultural values and in particular, instil respect and devotion to the ruler or founder. The "ideal" city was considered to be one of

a monument to its founder, through the use of order and visual tributes (generally in the form of art and architectural symbols) (Roeck 2004).

The design strategy of "ordering" space is not one confined to history, it goes without saying that order is utilised by designers frequently so that instead of chaotic and meaningless urban spaces, it ensures that they can become knowable and predictable (Lofland 1985). Urban cities use the same mechanism that humans have always used to make their world more liveable: order (Lofland 1985).

Both the social control design and art-centric design frameworks have historically used aesthetic design factors. For the purposes of this study, social control design factors are considered to include those employed by the compositional and artistic designers of art-centric public space.

Whilst some of these factors' influence on contemporary citizens may have been diminished by new technologies, and changing values, (such as architectural technologies allowing sky-scrapers and less emphasis in contemporary society on religion and monarchy) perhaps the more significant shortcoming of this form of design for public space is that it does not consider the comfort or free-will of the inhabitant other than attempting to supress it (Roeck 2004).

Jarvis (1980), on the other hand, outlined a third form of urban design frameworks that makes little reference to visual and aesthetic sensibility but places great focus on the experiential and behavioural matters relating to spaces, their physical layouts and surroundings. Jarvis identifies this form of urban design as more prominent in the designing of contemporary public spaces (Jarvis 1980).

Urban design and people friendly public space

Jarvis (1980), in defining "people friendly" urban design, asserts that current literature provides "*clear evidence of the possibilities for an urban design that starts from and measures its success by use and activity in places rather than physical form alone*" (Jarvis 1980). Some of the existing literature he refers to (as well as subsequent works by various contemporary writers) is outlined below and later forms the basis of a collation of design framework factors for people friendly design.

Matthew Carmona, in *Public places, urban spaces: the dimensions of urban design* (2003), describes urban design as a broad understanding incorporating not only the physical and visual elements of public space but also as an "integrative" and "integrating activity" (Carmona 2003). In other words, Carmona considers urban design as making places for people; better places than would otherwise exist or be produced (Carmona 2003).

Kevin Lynch, in *The Image of the City* (1960) outlines the way in which people's perceptions are not only connected to the physical elements of a space. "*Nothing is experienced by itself, but always in relation to its surroundings, the series of events leading up to it, the memory of past experiences*" (Lynch 1960, pp. 1).

"*We are not simply observers of this spectacle, but are ourselves a part of it, on the stage with the other participants*" (Lynch 1960, pp. 2).

This diversity in experience requires spaces that allow and foster rich arrays of activities and spatial requirements. Christopher Alexander in *Notes on the Synthesis of Form* (1964) and *A City is not a Tree* (1965) identifies the need to allow multiple, and diverging cross-connections of places, people and their activities (Alexander 1964; Alexander 1965; Jarvis 1980).

Alexander's analysis of the way in which people use space is not described as the "needs" of people, but rather the way in which people have "tendencies" to behave in particular ways in particular contexts (Alexander 1964; Alexander 1965). "Tendencies", for Alexander, are observable patterns of behaviour (Jarvis 1980).

As mentioned, a number of writers have outlined their "frameworks of essentials" for making public spaces people friendly and supportive of people's activities. Such works include William Whyte's *The Social Life of Small Urban* Spaces (1980), Francis Tibbalds' *Making People Friendly Towns: Improving the Public Environment in Towns and Cities* (2000), Ned Crankshaw's *Creating Vibrant Public Spaces: Streetscape Design in Commercial and Historic Districts* (2008), as well as the aforementioned works by Christopher Alexander.

The first author has collated these pertinent design factors here in order to serve as the basis of this research, acting as the checklist for case study analysis and categorisation of elements.

Human scale

Human scale can be achieved by reducing the overall scale of the public space, but more commonly by introducing design elements such as awnings or colonnades, that reduce the vastness of a space for the user and even shelter the user from the elements. This sheltering can also extend to unwanted connections with other users, physical surroundings and activities (Tibbalds 2000, pp. 57; Whyte 1980).

Shelter from (or exposure to) weather

Shelter from weather may not only increase the efficiency and ease with which people undertake necessary tasks, but may also increase the frequency and extend the duration of people using space for optional, pleasurable uses (Tibbalds 2000, pp. 57).

Thermal comfort is required for people to linger in a public space (Crankshaw 2008, pp. 162). Depending on the climate and site specific conditions, mixtures of shading and sunlit spaces may need to be provided, as well as shelter from winds or opening up to breezes (Crankshaw 2008, pp. 162; Whyte 1980).

Encourage people to linger and converse

Places to sit down comfortably need to be well considered. Seating areas should be configured to provide both prospect and refuge (whyte 1980). Arrangements of these elements should be clustered allowing people to look at one another, encouraging conversation (Crankshaw 2008, pp. 162). As Whyte (1980) famously proclaimed, underuse, not overuse is the great problem concerning urban space.

Activated edges

Sidewalks and edges of buildings should be treated as social spaces (Crankshaw 2008, pp. 160). More than pedestrian thoroughfares, street and building edges require activation and vitality to increase social interaction (Crankshaw 2008, pp. 160; Tibbalds 2000, pp. 57).

Permeability

Permeability of pedestrian routes connecting streets and public spaces (as well as private spaces) should be maintained (Crankshaw 2008, pp. 162; Tibbalds 2000, pp. 57). People come into an urban centre to be immersed in it, not to take refuge from it (Crankshaw 2008, pp. 162).

Simple, clear and uncluttered space

Uninhibited activities including gatherings in public space can be accommodated with well-planned spaces taking into account legibility of intended use and movement through space (Alexander & Poyner 1970; Alexander, Ishikawa & Silverstein 1977; Tibbalds 2000). The intention for public use of a space needs to be clear (Tibbalds 2000, pp. 57), if a space appears to be closed off or too private, the general public may not be aware that they are able to use the space, or may not feel comfortable doing so.

Sight lines

Visual connections between spaces, whether they are within the bounds of the public space or externally to them, assist in way finding, encourage exploration and also provide visual interest (Tibbalds 2000, pp. 57).

Networks of travel routes

Converging routes of travel can make for more interesting and social spaces (Tibbalds 2000, pp. 57-58).

Avoid dividing space

Keep pedestrians at ground level, and avoid using walls, fences or other physical barriers that block the free movement of pedestrians traversing the space (Tibbalds 2000, pp. 57-58). This also applies to dividing activities and user types of space. It is important that the interaction between all types of users is maintained (Tibbalds 2000, pp. 57-58).

Dividing space can also block pedestrian traffic and engagement with a space causing it to become "shady" and "out of the way", which can easily become an alcove for crime and deviance (Whyte 1980).

A major reason for public space is human contact and for people to be around other people. Tibbalds (2000) highlights the importance of arrival points to public spaces and the provision for meeting and congregating (Tibbalds 2000, pp. 57-58).

Provide legibility to greater urban context

Tibbalds (2000) considers that multiple types of users, of all cultural backgrounds and demographics, use contemporary urban spaces, so they need to be comprehensible and legible at all times of use (not just in broad daylight) (Tibbalds 2000, pp. 57-58). This legibility should not be solved through the use of signposts (Tibbalds 2000, pp. 58), but clearly demarcated spaces and edges of spaces for different uses. A vehicular roadway and a child's playground may have physical characteristics that differ and are thus comprehensible, but other combinations of spaces for various uses may require more sophisticated visual cues to legibly and clearly indicate the intended (and safe) use of space (Alexander & Poyner 1970; Alexander, Ishikawa & Silverstein 1977; Tibbalds 2000).

Kevin Lynch describes the importance of legibility in *The Image of the City* (1960). "*A distinctive and ordered environment helps the resident orient himself, place parts of the city into coherent categories, and acquire a sense of security that he can relate to the surrounding urban world. Hence, the city should be made "imageable", both in the sense that it projects distinctions and relationships that the observer can comprehend and that it complies with the observer's "mental picture" of the city*" (Lynch 1960, pp. 6).

Sternberg (2000) surmises Lynch's (1960) assertions on this topic by describing legible cities as identified and classified in an overall "pattern" (Lynch 1960, pp. 6; Sternberg 2000, pp. 37).

Thus, the legibility of a public space does not just apply to the extents of the space itself, but the arrival sequence to the space, the transitions between surrounding types of spaces and visual connections to surrounding landmarks and features of the city for the purpose of way finding and legibility (Tibbalds 2000, pp. 58).

Tibbalds (2000) extends this point to the use of the space at night time. It is preferable that public spaces are accessible 24 hours a day (Tibbalds 2000, pp. 57) and so the obvious requirement for lighting of public

spaces should be a consideration for designers (Tibbalds 2000, pp. 57).

Further to the obvious benefit of increased surveillance and safety afforded by artificially lighting spaces at night, the lighting of surrounding buildings and landmarks is also important for way finding and legibility as well as providing a pleasant backdrop for night time activities (Tibbalds 2000, pp. 58).

Provide things to look at and do

It goes without saying that people need some reason to inhabit or use a space. Tibbalds (2000) highlights the importance of catering for the "wants" of potential inhabitants (Tibbalds 2000, pp. 58).

Public art is often a solution to this factor, providing something of interest visually, particularly where there is no outlook to landmarks or natural elements (Alexander & Poyner 1970; Alexander, Ishikawa & Silverstein 1977; Tibbalds 2000).

Things to look at and do can also contribute to increased levels of socialisation. William Whyte (1980) speaks extensively about this and considers a "third element", or some type of spectacle to be simultaneously observing whist also socialising with those around you, as "triangulation" (Whyte 1980). Triangulation is a theory that, given a third thing to entertain them or focus on, two people are more likely to socialise as the third thing acts as an ice breaker (Crankshaw 2008, pp. 163).

Categorising uses of public space

In *Life Between Buildings: Using Public Space* (1971), Jan Gehl categorises outdoor activities into three types: necessary, optional and social.

Necessary activities

Gehl classifies any activity that participants have no choice but to undertake as a "necessary" activity. These activities could include travelling to work or school, running errands and waiting, whether for a bus or a friend or other such essential activity (Gehl 1971, pp. 143). "*Among other activities, this group includes the great majority of those related to walking*" (Gehl 1971, pp. 143).

These types of activities are influenced little by physical factors, such as the weather or the design of public space. While inclement conditions may slow the participant, and take them longer to complete, the activities will continue in almost all circumstances (Gehl 1971, pp. 143).

Optional activities

When exterior factors are ideal or suitable, optional activities take place (Gehl 1971, pp. 143). These activities are described by Gehl as those "*participated in if there is a wish to do so and if time and place make it possible*" (Gehl 1971, pp. 143). Optional activities (generally those that are pleasurable) may include taking a leisurely or sightseeing walk, reading or sunbathing (Gehl 1971, pp. 143).

Social activities

Children playing, conversations, communal activities and "people-watching" (defined by Gehl as passively seeing and hearing other people) are all classified as social activities. These activities are generally formed as a result of the other two categories of activities (Gehl 1971, pp. 143).

Gehl identifies that even passive social activities, such as being in the presence of other people, can be very appealing.

Gehl also outlines the importance of social connections by categorising social activities unreservedly as,

> "*Every time two people are together in the same space. To see and hear each other, to meet, is in itself a form of contact, a social activity. The actual meeting, merely being present, is furthermore the seed for other, more comprehensive forms of social activity…This is important in physical planning of spaces. While the physical framework doesn't directly influence the quality, content and intensity of social contacts, they can affect the possibilities for meeting, seeing and hearing people…Life between buildings comprises the entire spectrum of activities, which combine to make communal spaces in cities and residential areas meaningful and attractive*" (Gehl 1971 pp. 144).

For public squares particularly, social activities are perhaps the most indicative of successfully designed space (Gehl 1971). Not only do the spaces need to accommodate the functional requirements for necessary activities, but be pleasant enough to encourage optional activities and achieve the various connections and proximities required in order to create and encourage social interactions (Gehl 1971; Tibbalds 2000). "*Within certain limits – regional, climatic, societal – it is possible to influence how many people and events use the public space, how long the individual activities last and which activity types can develop*" (Gehl 1971, pp. 146).

OBJECTIVES

The objective of this research is to demonstrate the way in which urban design framework factors, individually and in various well-considered arrangements, stimulate and encourage social activities in Brisbane public squares.

In investigating the various design frameworks for contemporary urban spaces it has been identified that, in public spaces, the occurrence of social activities is perhaps the best indicator of effectively designed space due to the numerous requirements needed for

socialising to take place in contemporary urban spaces (Gehl 1971; Tibbalds 2000).

In order to answer the primary research objective, this research seeks to link contemporary urban design factors (and the relationships between them), with observed tendencies of inhabitants.

From this, the research will form conclusions regarding Brisbane's locally distinctive approach to urban design as well as the way in which users engage with these design frameworks, influenced by local societal, cultural and climatic factors.

METHODOLOGY

The following diagram outlines the three stages of the research methodology (see Figure 1 below). During each stage, a series of subsidiary methods answer the research objectives.

Figure 1 Methodology Stages (Ridings 2012)

Stage 1: Define

Stage 1 focuses on the existing literature to surmise and define the design frameworks and their individual design factors that will be applied to the Brisbane case study sites, as well as defining the categories of activities that will be measured and mapped. The final aspect of research to be defined is the case study locations that have been selected for their significance in Brisbane's urban context both presently and historically (see Figure 2 below). The selected case study sites also convey examples of the design intentions and frameworks previously outlined.

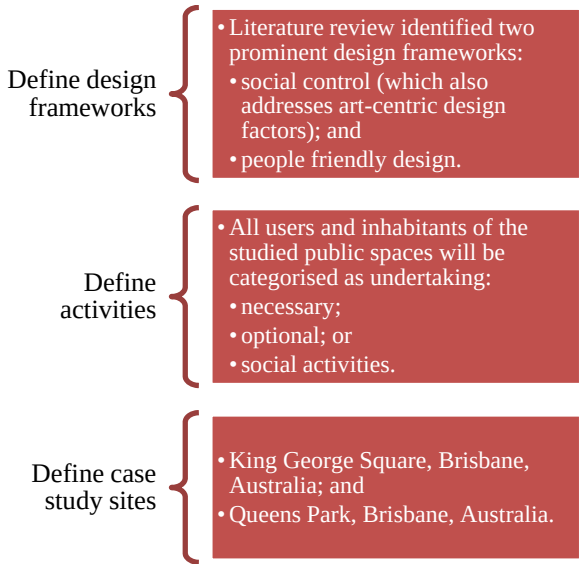

Figure 2 Methodology Stage 1: Define (Ridings 2012)

Stage 2: Map

Framework factors present at each of the case study sites have been located and mapped. The various types of activities that engage with the site and the design factors have been mapped and recorded graphically highlighting patterns of movement and engagement within and surrounding the case study sites (see Figure 3 below).

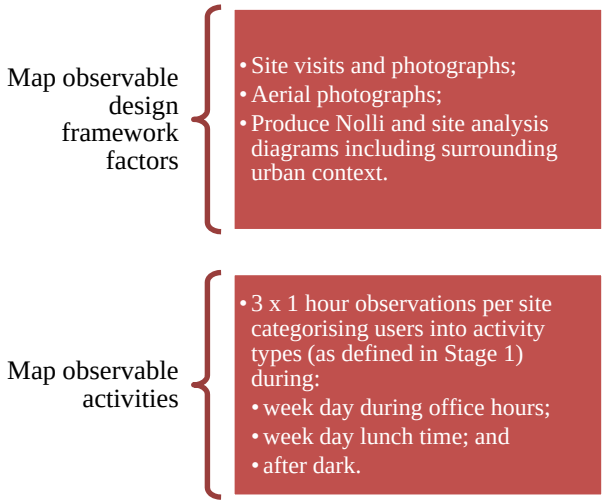

Figure 3 Methodology Stage 2: Map (Ridings 2012)

Stage 3: Analyse

The final stage of research looks at the data collected in both mapping capacities defined in Stage 2 in order to determine the success of the public spaces through analysing the patterns and "tendencies" of the users and also their engagement with the identified design factors (see Figure 4 below).

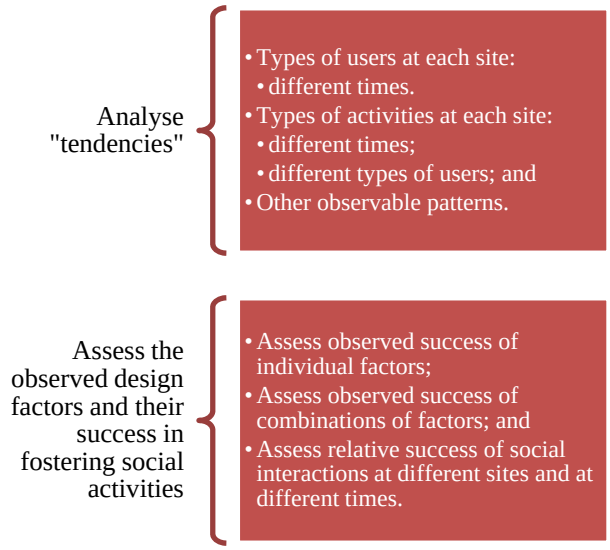

Figure 4 Methodology Stage 3: Analyse (Ridings 2012)

RESULTS

Stage 1: Define

Observable design framework factors

The design framework factors identified fall into two categories in order to acknowledge the shifts in accepted design practices and social and cultural contexts.

As Roeck's (2004) work previously outlined described, historical public spaces were designed with particular views to "control" public perception and behaviour so that cities were ordered and "civilised" (Roeck 2004).

The social control design framework factors (which include much of the aesthetically focused and art-centric framework factors as mentioned in the background of this paper) are identified as:

1. Scale;
2. Vertical organisation;
3. Materials;
4. Beauty and ornamentation; and
5. Order and the ruler's intention.

The second framework has been identified through the review of existing research regarding contemporary urban spaces and the ways in which urban design has shifted to be more "people friendly". The frameworks outlined by various authors, pertinently Alexander (1964; 1965; 1970 & 1977), Crankshaw (2008), Tibbalds (2000), and Whyte (1980), as previously outlined, have been consolidated by the first author as:

6. Human scale;
7. Shelter from (or exposure to) weather;
8. Encourage people to linger and converse;
9. Activated edges;
10. Permeability;
11. Simple, clear and uncluttered space;
12. Sight lines;
13. Networks of travel routes;
14. Avoid dividing space;
15. Provide legibility to greater urban context; and
16. Provide things to look at and do.

Observable activities

The categorisation of people's activities will borrow from the previously outlined works of Gehl (1971). Gehl categorises all human uses of public space into one or more of the following categories:

A. Necessary activities;
B. Optional activities; and
C. Social activities.

In undertaking this study, the first author has identified two public sites in Brisbane (see Figure 5 below) that are well-used by the general public and have various contextual factors that influence the activities that take place there, as well as the way in which they have been designed and re-designed over their history.

Case study locations

The first of two case study locations is King George Square, Brisbane (see Figures 6 and 7 below). This site has been selected due to its high profile culturally, socially and historically. King George Square is, in effect, the forecourt for Brisbane's City Hall and has throughout its history provided a "gateway" from the Northern parts of Brisbane to the central business district (CBD), originally in the mode of vehicular traffic, and more recently via public transport and pedestrian traffic.

Figure 5 Brisbane City Satellite Map showing case study sites King George Square (KGS) and Queens Park (QP) (NearMap 2012)

The site's original design employed many of the social control design factors identified by Roeck (2004) particularly due to the City Hall's function has an authoritative civic building. In recent times, however, the square that has emerged in this location has begun to transform the space into a people friendly destination. It is for this reason that King George Square is used as a base for this study, in order to gauge the success of the design framework employed recently by the site's designers.

Figure 6 Case study location: King George Square, Brisbane, Satellite Photo (NearMap 2012)

Figure 7 King George Square, Brisbane (Ridings 2012)

Queens Park, Brisbane, is only a few blocks from King George Square; however the design factors employed by the designers, and also the immediate context of the site, differ greatly.

Figure 8 Case study location: Queens Park, Brisbane, Satellite Photo (NearMap 2012)

Figure 9 Queens Park, Brisbane (Ridings 2012)

Queens Park sits between a cluster of historic buildings (see Figure 8 above) and uses strong, formal geometry presumably to highlight the importance of these imposing structures (see Figure 9 above). At first consideration of this square, one might assume that the formal geometry has some historical grounding and that the angular paths of travel (formalised with stone kerbing and paving) are part of the original designer's intent. This design criterion, that historically has demonstrated the "ruler's" intention, is often evident in historical architecture and traditional public squares (Roeck 2004).

The history of Queens Park, however, suggests that this geometry and the implied "ruler's" intent was a recent reconsideration of the site. While Queens Park today forms a public "square", of sorts, the original park was considerably less formal.

The changing and evolving space that is now known as Queens Park is in a precinct rich in history and significance. It is for this reason that this site has been selected to be analysed alongside King George Square.

Both these sites have been redeveloped in recent years, but with vastly different approaches. Juxtaposed against King George Square's people friendly design, the designers of Queens Park have opted for a more traditional approach to public space design, utilising much of the design framework factors identified by Roeck (2004) as factors for social control.

Due to the historical significance and changing landscape of this site, a brief history of the precinct follows. This history formed the basis of the selection of Queens Park as a case study.

As it exists today, historical, sandstone buildings that create a picturesque but somewhat imposing and formal square surround Queens Park. The edges of the square, whilst visually defined by the edges of buildings on all four sides, are physically demarcated by roads on three sides (George Street to the North-East, Elizabeth Street to the North-West and William Street to the South-West). The only edge of the square that is immediately and physically defined by built form is the South-East edge, which is the front façade of the historical Executive Building (1906) (The State of Queensland 2008).

Opposite, across Elizabeth Street, is the Treasury Building (1893-1928), often considered to be Brisbane's most imposing historical building (The State of Queensland 2008). The remaining two sides of the square are defined by the historical State Government Insurance Office (SGIO) (1922) across George Street (next to the recently constructed Oaks Casino Towers building) and the Old Queensland Museum (1879) across William Street (The State of Queensland 2008).

The paths and statues within the square are arranged symmetrically responding to the symmetry and order employed in the design of the surrounding buildings, but primarily the Executive Building, with which the park directly relates.

The paths and landscaping, however, formed part of a modern redevelopment of the park, with only the tropical themed landscaping (a response to the local sub-tropical climate) and the centrepiece of the park, a large statue of Queen Victoria, being retained (The State of Queensland 2008).

The statute of Queen Victoria was unveiled in 1906, coinciding with the completion of the Executive Building (which forms the imposing backdrop to the statue), and resulted in the re-naming of the park from "Executive Gardens" which it was briefly named, to "Queens Gardens". Later it would become known as "Queens Park", as it is known today (The State of Queensland 2008).

The original gardens were much smaller than the square that exists today due to the site previously housing the Church Institute and Synod Hall buildings (pictured in Figure 11 below) up until their demolition in 1962. These buildings were bound by George, Elizabeth and William streets, with Queens Gardens sitting between them and the Executive Building (The State of Queensland 2012).

A photo (Figure 10 below) of the gardens prior to the demolition of the hall buildings in 1948 shows the relaxed nature of the original design, primarily consisting of palm trees and lawn. The formal pathways that exist today are noticeably absent in the image (The State of Queensland 2008).

Figure 10 The Executive Building and Queens Gardens in 1948 (The State of Queensland 2008)

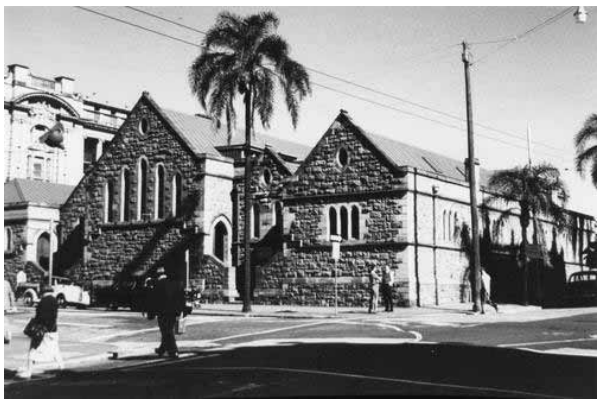

Figure 11 The Church Institute and Synod Hall buildings in 1959 prior to their demolition in 1962 (The State of Queensland 2012)

As well as a monument to Queen Victoria, the square today plays host to various acknowledgments to historical events and key contributors to the history of Brisbane and Australia.

On the corner of William and Elizabeth streets and at one of the formal pedestrian entrances to the square stands a statue of former Queensland Premier TJ Ryan (Premier between 1915 and 1919) (The State of Queensland 2008). The opposite corner, on Elizabeth and George Streets, is a monument to the servicemen and servicewomen of WWII, erected in 1990 by the Queensland Service Women's Association (The State of Queensland 2008).

A Krupp 77mm field gun also sits in the square surrounded by formal gardens. This historical artefact was captured from the German Army in WWI by Australian troops (The State of Queensland 2008).

These factors all contribute significantly to the look and feel of the public space and have had an obvious and very deliberate impact on the redevelopment of the site.

Whilst both sites studied in this research have significant historical importance, the designers of both have gone about retaining and celebrating their histories in fascinatingly different ways. Furthermore, the consequences of these design strategies have had enormous impacts on the spatial qualities of the spaces and the opportunities for public activities within them.

Stage 2 of the research maps out each of the design factors evident in the spaces, as they exist today.

Stage 2: Map
King George Square

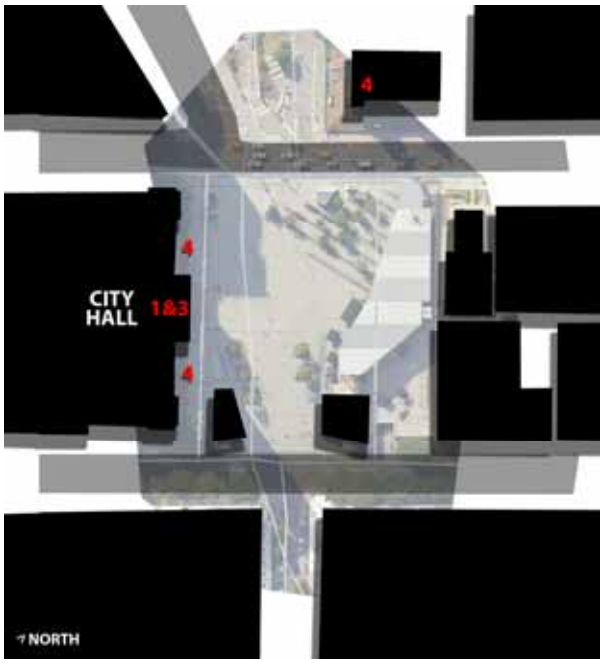

Figure 12 King George Square and Social Control Design Framework Factors (NearMap 2012 & Ridings 2012)

1. ***Scale***
2. ***Vertical organisation***
3. ***Materials***
4. ***Beauty and ornamentation***
5. ***Order and the ruler's intention***

King George Square's current design does not in itself utilise social control design factors (see Figure 12 above), however the historical buildings that surround it do contribute to the space's aesthetic and spatial qualities due to their intricate detail and historical building fabric. Brisbane's City Hall (1930) (National Library of Australia 2012) to the South-West of King George Square is the primary feature of the square aesthetically but also culturally.

There appears to be an obligatory reverence for the historical civic building given the setbacks from it (no street furniture sits against it) and views from the full extent of the square (and surrounding streets) are maintained towards the building's imposing, yet beautiful, sandstone façade.

The building is commanding due to its scale but also the relative scale of the building's features such as the Corinthian order columns supporting the elaborately carved tympanum (Newell 1997).

The development of "Albert Square" (later known as "King George Square"), involved the demolition of the original stairs (shown in Figure 13 below) to make way for a larger square after the acquisition by City Council of the land opposite City Hall in 1969 (National Library of Australia 2012; Newell 1997). Around the same time the square was closed off to vehicular traffic (National Library of Australia 2012; Newell 1997).

Figure 13 Brisbane City Hall with original stairs, (Frank Hurley date unknown; National Library of Australia 2012)

Figure 14 King George Square and Brisbane's City Hall (Ridings 2012)

The relative scale of City Hall may have been diminished with the modern densification of Brisbane's CBD (note the neighbouring high rise buildings shown in Figure 14 above); however the building was once the tallest building in Brisbane (the clock tower sits 91m above ground level) (Newell 1997), and was originally set atop a grand and commanding flight of stairs (shown in Figure 13 previously) (National Library of Australia 2012).

The gridded streets sit around it and when one stands in the centre of the square, sightlines are maintained South-East through the city's mall and beyond, towards the Botanical Gardens.

Further to this, the retention of historic status in the square, such as the bronze Lion sculptures that "guard" the City Hall (Newell 1997) convey a reverence and nostalgic respect for the City Hall, and, as the name of the square would suggest, the British Empire.

These factors contribute to a sense of prevailing order and the "ruler's" intention.

King George Square has over the years been subject to multiple redevelopments (Newell 1997), the most recent of which was completed in 2009 (McMahon 2009).

The current design is contemporary and utilises numerous people friendly urban design factors (see Figure 15 below).

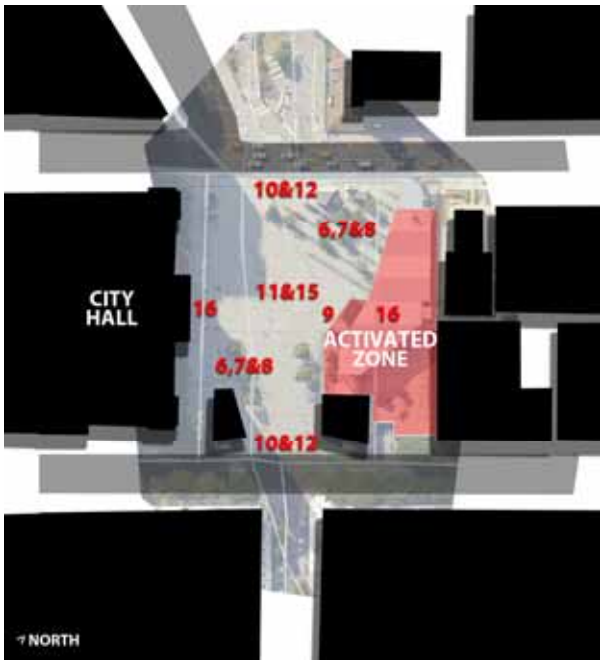

Figure 15 King George Square and People Friendly Design Framework Factors (NearMap 2012 & Ridings 2012)

6. ***Human scale***
7. ***Shelter from (or exposure to) weather***
8. ***Encourage people to linger and converse***
9. ***Activated edges***
10. ***Permeability***
11. ***Simple, clear and uncluttered space***
12. ***Sight lines***
13. ***Networks of travel routes***
14. ***Avoid dividing space***
15. ***Provide legibility to greater urban context***
16. ***Provide things to look at and do***

King George Square's design utilises leafy trees to shelter and "soften" areas for human gathering and resting. The various clusters of benches sit in configurations allowing people to sit in the shade whilst also observing the greater square area and passers-by (see Figure 16 below). These areas appear to have been designed with the human scale in mind, as often benches are spaced carefully to allow conversations and comfortable gathering of groups varying in sizes.

Figure 16 King George Square's people friendly seating areas (Ridings 2012)

These spaces encourage people to linger within the square, providing passive engagement with others, as well as outlook to the light-filled square and adjacent historical City Hall which provides a pleasant backdrop.

The square is highly permeable, allowing pedestrians to enter at almost any point along both of the bounding streets (Adelaide and Ann Streets) and the crossing of either of these streets is intentionally convenient, with regular traffic light changes and wide pedestrian crossing zones.

Figure 17 The large and uncluttered square provides legibility to surrounding urban context and allows intersecting paths of travel (Ridings 2012)

This permeability also creates a generally uncluttered and simple space (see Figure 17 above), where sightlines are maintained axially to the major paths of pedestrian travel that correspondingly allows good way finding and spatial legibility.

Figure 18 King George Square's activated zone of restaurants and bars (Ridings 2012)

The space is only occasionally divided by small barriers; presumably placed to demarcate areas associated with commercial restaurants and bars (particularly with regard to the serving of alcohol and the subsequent containment of drinking patrons).

These restaurants and bars form one of the major elements of the square. This area of the site is referred to in this research, and in the mapped diagrams, as the "activated zone" to highlight its fundamental importance to the success of this site.

Providing prescribed activities is one way to activate a public space, and in this case it appears to be a successful approach.

The activated zone consists of commercial outlets for food and drinks, but also provides the constant "liveliness" that public spaces often require in order to draw people in and for them to linger, engage and interact (see Figure 18 above).

A practical benefit of this structure is also that people are sheltered from the heat and rain which

enables optional and social activities to proceed unhindered by occasional inclement weather and Queensland's (sometimes harsh) sub-tropical climate.

The lively hub of activity is maintained throughout the day, and whilst lunchtime is particularly busy (for obvious reasons), the subsequent movements of staff as well as the simple but effective presence of furniture, interior decorations and signage associated with it mean that the area appears busy and lively at almost all times of the day.

The activated edge that this zone provides the square, along with the permeable edges to both bounding streets, provides an effective network of possible travel routes. Users of the space are able to meander their way through the square, observing the historical surroundings or engaging in the activated zone of food outlets, and potentially, encouraging spontaneous interaction with other users of the space.

Figure 19 King George Square Satellite Photo (Google Maps 2012)

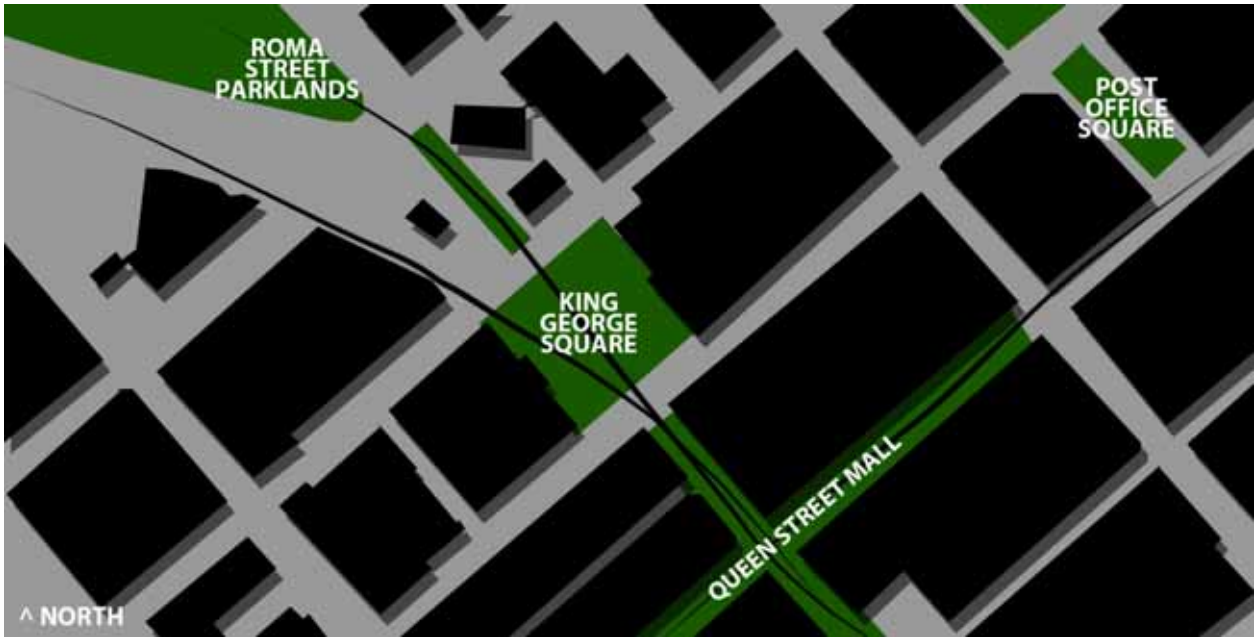

Figure 20 King George Square Context and Travel Path Diagram (Ridings 2012)

In order to understand the context in which people go about their daily activities in the Brisbane CBD, and in particular King George Square, a greater urban context and primary pedestrian travel paths (depicted in Figure 20 above as black lines) have been identified in the above diagram.

Two major pedestrian connections have been identified for King George Square. The first connects the busy Queen Street Mall to Roma Street Station, and the other connects it to the Roma Street Parklands and suburbs north of the city. In this way, King George Square acts as a gateway to the central business precinct of the city, making the site a bustling area throughout the working week.

King George Square also provides access to a major underground bus station, with two entrances at the South-Eastern edge of the site, along with multiple other bus stops situated above ground on the adjacent Adelaide and Ann Streets (see Figure 21 below).

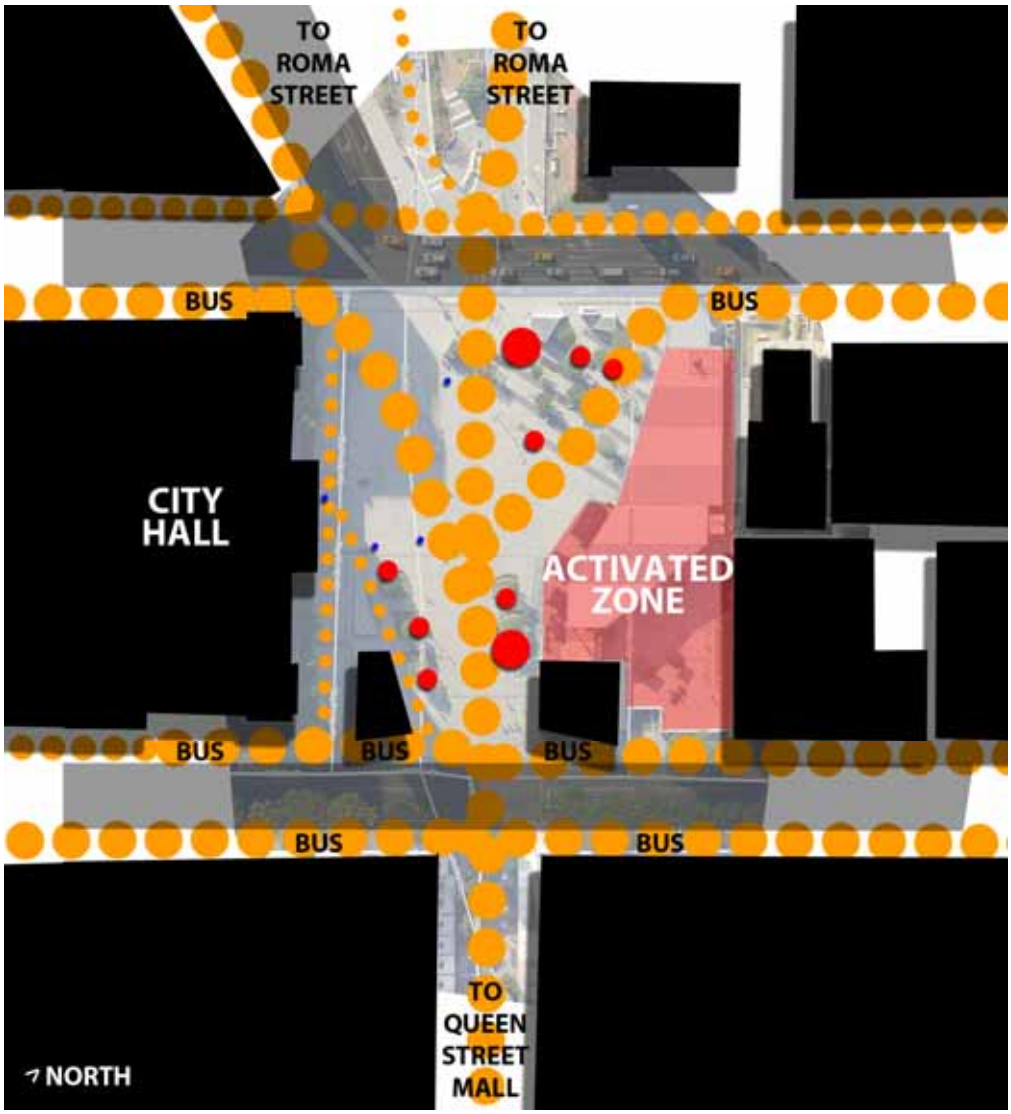

Figure 21 King George Square Field Study: User Engagement 8:20-9:20am Friday 12 October 2012 (NearMap 2012 & Ridings 2012)

During the busy morning "rush hour", the users of the space consisted largely of users walking to or from the Queen Street and bus station precincts. The configuration of the site appears to "funnel" pedestrian traffic from the Roma Street precinct and surrounding office buildings into the Queen Street Mall shopping precinct, which is in itself a major public transport hub (Newell 1997).

During this site visit, major pedestrian travel paths were mapped (shown above in orange). Generally, at this time of the day, most users of the space travelling to work walked quickly and directly across the square.

The occasional tourist was observed photographing City Hall or the statues that occupy the square.

Even at this time of day, the "activated zone" shown above in light red appeared lively and energetic.

Those who weren't rushing off to work would occasionally sit down (there are a great number of places to do so, and quite a lot of them in the shade of a tree).

Those sitting were observed to be people-watching, or as Gehl (1971) would classify them, "passively socialising". A number of people undertaking these optional and leisurely activities lingered in the space for some time – some remained there for more than the hour-long site visit.

While clusters of bench seats do exist in King George Square, other benches sit in isolation (but usually in the shade of a tree) and are positioned for observing the surrounding cityscape and the bustle of pedestrian traffic.

Occasionally, however, groups of 4 or more people were observed gathering at these isolated benches, and thus some members of the gathering were seen standing or crouching in order to complete a small circle of people, more suited to a conversation.

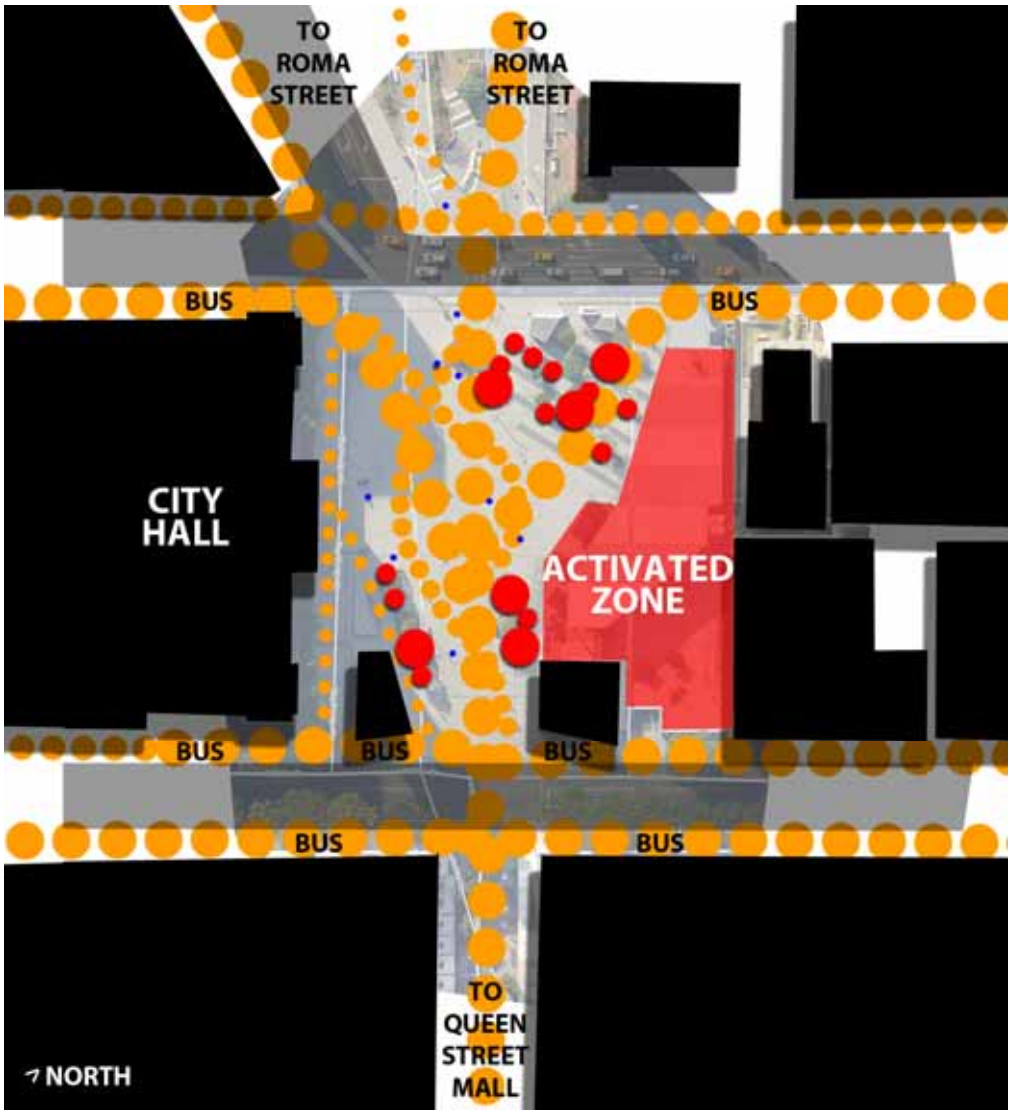

Figure 22 King George Square Field Study: User Engagement 12:40-1:40pm Friday 12 October 2012 (NearMap 2012 & Ridings 2012)

At lunchtime, the pedestrian traffic greatly increased. The travel paths become less direct to become more "meandering" in nature.

This change was likely a result of a more casual engagement by users who were perhaps on their lunch break and also the increased number of tourists, shoppers and diners observed in the area.

The historical surroundings appeared to be popular with tourists as many were observed photographing in the square but perhaps the main attraction was the open space and the energetic dining experience provided in the "activated zone" shown in Figure 22 above in red.

The activated zone was full of life at this time of the day. Not only did this provide leisure and entertainment for the patrons of the restaurants and bars, but appeared to draw others, who weren't directly

engaging with the businesses, but who were happily congregating on the edges of the establishments.

The square was busy and social, with many examples of gatherings of people of various sizes engaging in people-watching and active interactions and conversations.

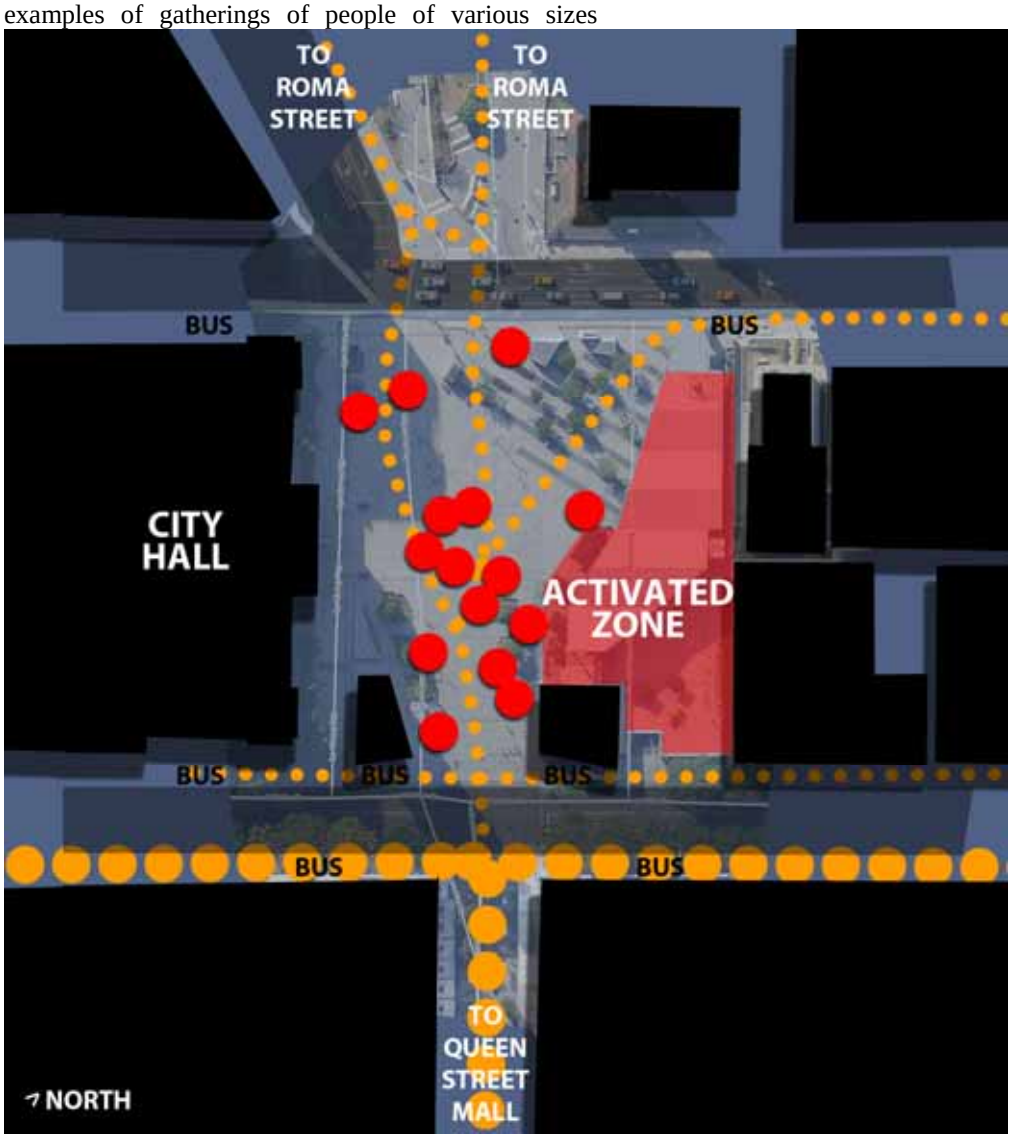

Figure 23 King George Square Field Study: User Engagement 6:20-7:20pm Tuesday 23 October 2012 (NearMap 2012 & Ridings 2012)

Figure 24 King George Square, Well-Lit at Night (Stephenk1977 Flickr 2009)

After dark, King George Square's popularity is barely affected (see Figure 23 above), with the entire square and enclosing buildings well light (see Figure 24 above), forming an attractive and dynamic backdrop for the social activities that take place there.

Whilst the activated zone continues unhindered by the time of day, the activities taking place on the open square itself are notably different.

The much lower levels of pedestrian through-traffic contribute to a much quieter and relaxed space, as well as groups of people being generally a minimum of two or three. Few single users were observed at this time of night.

Whilst some groups sat on the benches that were popular during the sunny daylight hours, most were observed standing and sitting out in the open square. With the sun down, and little pedestrian traffic cutting through the square, this location now become a space for stopping and chatting, engaging in various social activities.

The space generally is a social one at this time of night, with few necessary activities taking place – the space has a particularly leisurely feel.

Whilst King George Square was observed to be a lively and social space, Queens Park failed to produce the same vigour and energy.

Queens Park

Scale, materials, beauty and ornamentation are all major factors contributing to Queens Park's spatial qualities (see Figure 25 below).

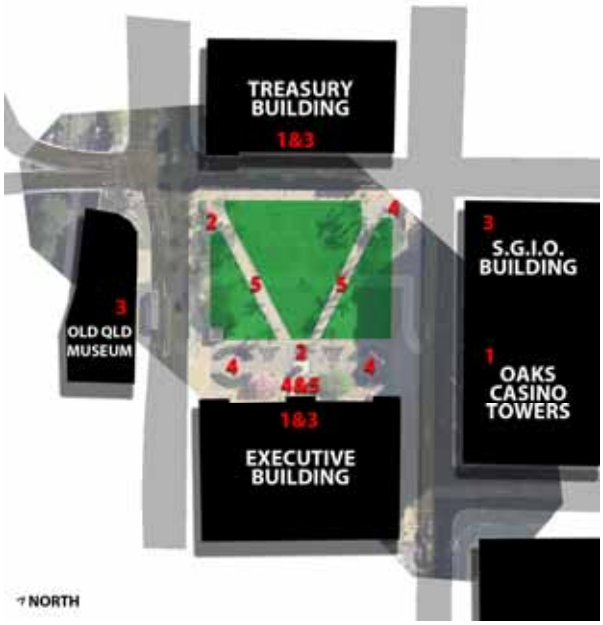

Figure 25 Queens Park and Social Control Design Framework Factors (NearMap 2012 & Ridings 2012)

1. ***Scale***
2. ***Vertical organisation***
3. ***Materials***
4. ***Beauty and ornamentation***
5. ***Order and the ruler's intention***

Figure 26 Queens Park with Oaks Casino Towers in the background (Ridings 2012)

The historical buildings that bound the space are imposing both in their appearance and scale. Generally, there are no references to the human scale in the design of the historical buildings with the exception of the more recently constructed Oaks Casino Towers building, which has an awning covering the footpath. This awning, however, is across the road from Queens Park and so offers no immediate refuge from the weather to users of the park, nor does it lessen the impact of the vast masses of built forms that surround, and dwarf the users of the square (see Figure 26 above).

As this paper has previously outlined, the historical richness of the Queens Park precinct contributes, by its nature, to the intricate ornamentation and building fabric that make up the site. The buildings are, while vast and imposing to the human user, impressive aesthetically and showcase incredible craftsmanship that is welcome relief from the steel, glass and concrete of the urban context more generally. These aesthetic attributes appear to contribute to the drawing in of tourists to the square.

Figure 27 The Treasury Building's imposing façade from Queens Park (Ridings 2012)

Vertical organisation is evident with the large statues on the site (both of Queen Victoria and TJ Ryan), which sit atop tall plinths. This is an obvious and deliberate design strategy to place importance on these public figures as historically significant. These elements of the square also prove to be popular subjects of photography as tourists wander through the precinct.

As this paper has highlighted previously, the history of Queens Park is not obvious when first considering the space. The spatial qualities generally support the theory that the park has been designed as a forecourt to the Executive Building to which it relates directly. Furthermore it also appears to be designed as a square to visually (and to a lesser extent physically) connect the surrounding historical buildings, all significant in their original functions (i.e. as government and civic buildings).

The front façade of the Executive Building appears to be have been designed to relate to the public with scale and grandeur, both in terms of the façade itself but also the forecourt from which it is observed. However when the building was originally completed, it would be a further 56 years before the demolition of the Church Institute and Synod Hall buildings in 1962 that sat in front of the imposing façade, largely obscuring sightlines to the façade from the surrounding area (The State of Queensland 2012).

The symmetry of the park, with straight paths directing pedestrian travel and sight lines towards the Executive Building and the statue of Queen Victoria create a strong sense of order and the "ruler's" intention within the space. Large geometrically shaped lawns make way for uninterrupted views to the historical buildings that border the site (see Figure 27 above). Bench seats, street lamps and trees are also placed geometrically and are generally evenly spaced. Formal, neat garden beds close to the building highlight historically significant items such as plaques, Queen Victoria's statue and the historic WWI field gun.

While these elements are almost all recent additions to the site, they appear to be attempting a sort of "retrospective commemoration" of the site.

Despite Queens Park providing a rare expanse of lawn for people to spread out on and break away from the urban and working environments that surround it, the space provides very few other people friendly design framework factors (see Figure 28 below).

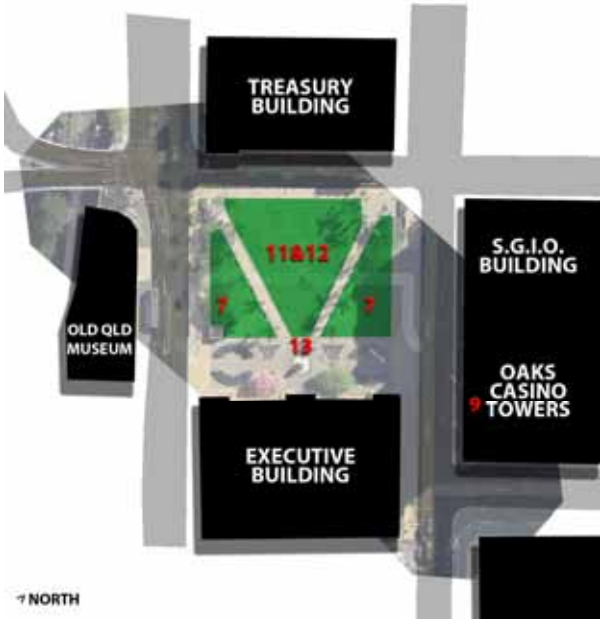

Figure 28 Queens Park and People Friendly Design Framework Factors (NearMap 2012 & Ridings 2012)

6. ***Human scale***
7. ***Shelter from (or exposure to) weather***
8. ***Encourage people to linger and converse***
9. ***Activated edges***
10. ***Permeability***
11. ***Simple, clear and uncluttered space***
12. ***Sight lines***
13. ***Networks of travel routes***
14. ***Avoid dividing space***
15. ***Provide legibility to greater urban context***
16. ***Provide things to look at and do***

As previously mentioned, the site provides very little reference to human scale, except for the provision

of a few shade trees (depending on the time of year, as they appear to be deciduous).

Perhaps the most significant success of the site, in terms of its design, is the previously mentioned open lawn. The lawn achieves a few people friendly design goals in with one simple strategy.

By providing a lawn in this urban context, users are able to utilise it in a way that suits them, due to its flexible nature. Simple and uncluttered space is integral to a flexible and successful urban space in contemporary cities (Tibbalds 2000).

What the lawn does not provide, however, is clear purpose in terms of the intended use of the square. One could argue that the space indicates two very different functions for users to engage with, a casual lawn to sprawl out on, versus a formal and demarcated route for travel. As previously mentioned, Tibbalds (2000) considers that the legibility of intended use of a space is equally as important as providing uncluttered and simple spaces (Tibbalds 2000, pp. 57).

The space is generally undivided, which makes for easy traversing for pedestrians wanting to take an alternate route to that laid out for them in pavers. One minor blemish to this feature is the kerbs to the pathways. The kerbs could potentially be tripping hazards for larger gatherings or social interactions such as a football game, and is another subtle element enforcing the "order" and social control design factors often impose.

Sight lines towards the surrounding buildings not only allow for observation and enjoyment of the beautiful and historical building façades, but also allow legibility of the whole precinct. Users of the space, whether regular users or visitors to the urban environment, are able to observe multiple destinations from the square and can also use visible landmarks (such as the site's historic buildings and statues) as way finding devices and meeting points.

People want things to look at and do, and whilst Queens Park offers no "activated" areas for shopping or structured socialising, the space is unlike the vast majority of urban environments elsewhere in the city, and so people are able to use it in multiple different ways.

Users are theoretically able to spread out and relax, or socialise as they please. The historical surroundings, views to the sky and landscaping provide users a picturesque backdrop for their daily activities.

The geometric pathways converge in front of the main statue, which provides a simple network of pathways. There is, however, no real provision for gathering at this intersection for meeting or incidental gathering.

The site lacks any structured (i.e. built) encouragement for people to converse, such as clustered benches or protection from the weather. Furthermore, excluding the small and lacklustre adjacent stretch of shop frontage pictured in Figure 26 previously, no activated edges exist to boost pedestrian traffic, interest and social activities.

On top of this, three of the four edges of the square are bound by busy roadways with no substantial division between the noise of the vehicles and the open lawn.

Figure 29 Queens Park Satellite Photo (Google Maps 2012)

Figure 30 Queens Park Context and Travel Path Diagram (Ridings 2012)

The Context and Travel Path Diagram above shows major pedestrian travel routes (depicted in Figure 30 above as black lines) connecting the south side of Brisbane River with Brisbane Square and Queen Street Mall beyond (to the North-East).

Similarly, George Street shown on the North-East edge of Queens Park forms the connection from the South-East peninsular of the Brisbane CBD, known as Gardens Point, to Queen Street Mall.

Parallel to George Street, the same pedestrian travel route takes place along William Street; however Queens Park provides a shortcut to this route.

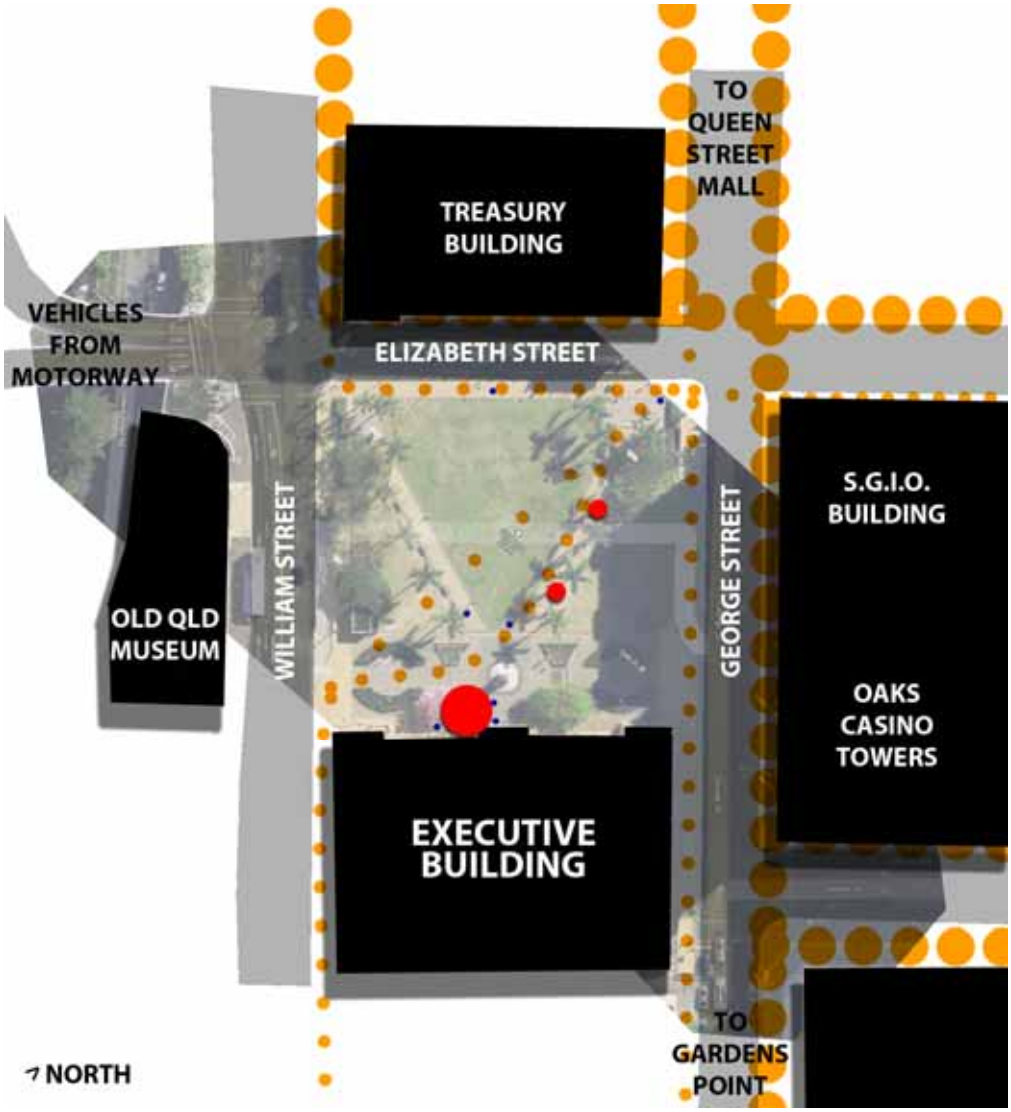

Figure 31 Queens Park Field Study: User Engagement 9:30-10:30am Friday 12 October 2012 (NearMap 2012 & Ridings 2012)

Queens Park was almost deserted the morning the site visit was undertaken (see Figure 31 above). Throughout the hour long visit, only one social activity was observed in the square which consisted of 10-15 people in a guided group sightseeing. They gathered in front of the Executive Building briefly, presumably pausing to discuss the history of the building and surrounding area.

Other than this event, and a number of tourists wandering through to take photos of the statue of Queen Victoria, little use of the space was observed.

At this time of the morning, almost the entire lawn in the square was in shade due to Oaks Casino Towers casting a large and ominous shadow. This did, however, create a pleasant environment in the square as the day was cloud-free, and hot (Brisbane's climate is sub-tropical and often is hot and humid during October, when this study took place).

The site is positioned close to the Brisbane River, and as such receives pleasant breezes and a good view of the sky (which is rare in many urban environments, due to tall, obscuring buildings).

Despite these pleasant conditions, only a few lone users sat (and slept) on the benches to gain respite from the bustling city in peak hour.

It was observed that most of the pedestrian traffic passing by the site was on the opposite side of George Street connecting Gardens Point to the Queen Street Mall shopping and transport hub.

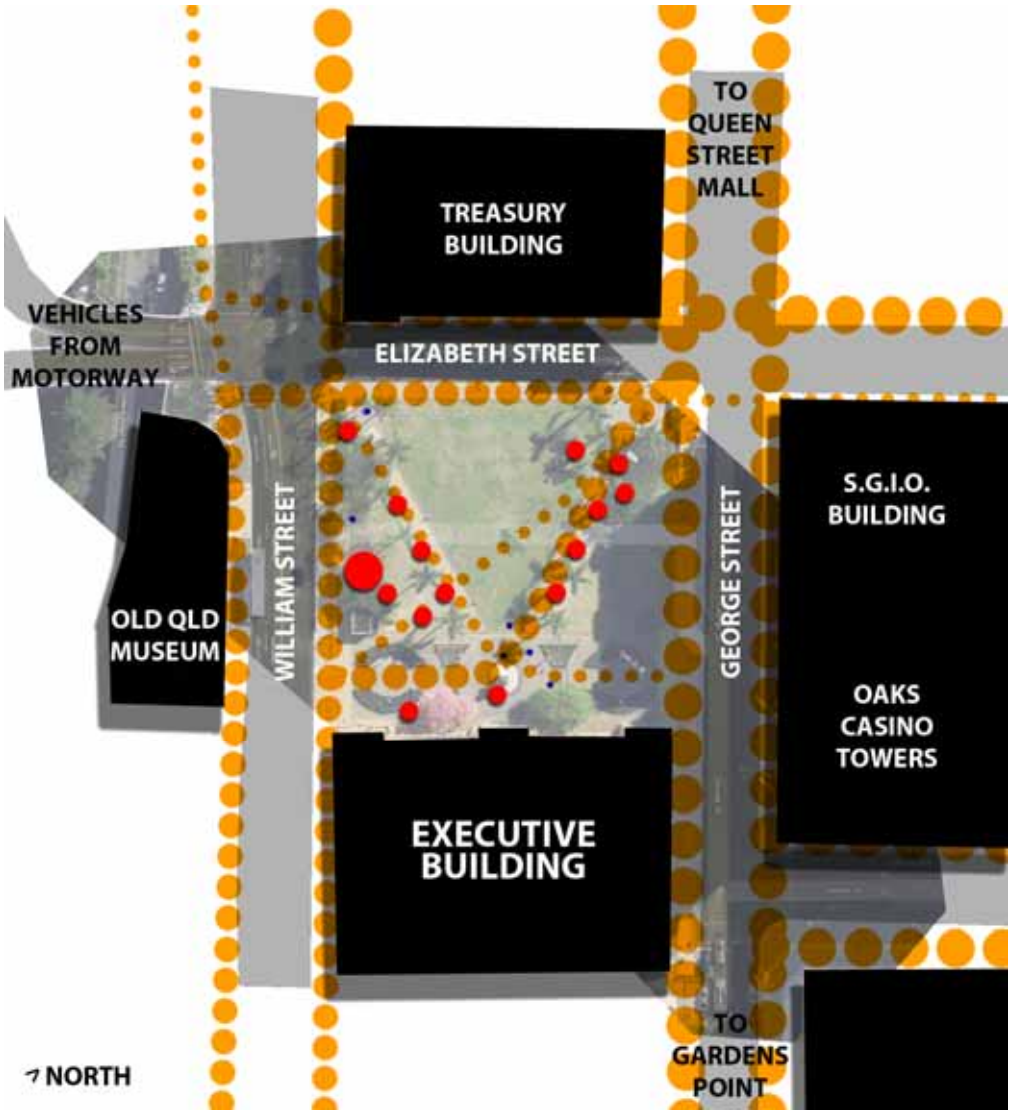

Figure 32 Queens Park Field Study: User Engagement 11:30-12:30am Friday 12 October 2012 (NearMap 2012 & Ridings 2012)

At lunchtime the user engagement with Queens Park picked up considerably as pedestrian traffic was drawn through the space, presumably being used as a shortcut between office buildings and the various food outlets situated in the Queen Street Mall precinct (see Figure 32 above).

This liveliness did not, however, linger in the space. The truly active areas were the footpaths surrounding the square and, particularly, that on the opposite side of busy George Street.

The roads themselves were busy too. The traffic noise was substantial and was accented by the frequent sounding of horns and occasional siren.

At this time of the day, the shade was minimal across the square. While there are a number of trees, the majority are palms, which provide minimal shade.

The other trees were also sparse in foliage (presumably a seasonal occurrence).

Office workers were observed resting under the few patches of shade, sitting and laying out on the grass. The occasional pair of workers would sit together for lunch; however social activities were generally inert and relaxed, unlike much of what was observed at King George Square.

The benches were frequently used and sometimes for reasonably long periods of time, however these were generally lone users.

A quieter corner of the square adjacent the Old Queensland Museum was used by a group of people for a small picnic for which they had brought their own table and folding chairs.

Other than a few tourists wandering through (none lingered in the square other than to take photographs), the general users of the space were workers presumably on their lunch break. Many of the workers were observed speaking on their phones or smoking which would indicate that the space is used for activities that cannot take place indoors. This contrasts to the observations of entertainment activities that were observed at King George Square.

Those that did use the space for leisure (all of which were either individuals reading, or pairs quietly conversing), however, did linger in the space for considerable time. On average, those that were observed sprawling on the lawn stayed at the space between 30 and 60 minutes.

Users were seen having to relocate at various times to stay within the small portion of shade afforded by the surrounding trees.

This observation is significant due to its consistency across both sites. At the time of research, during October, a spring month in Australia, the temperature and UV levels are considerably higher than many other cities in Australia and around the world.

Whyte's (1980) observations regarding the difference between "sun" and "light" perhaps do not apply to Queensland outdoor spaces in the same way that they apply to American spaces, at least during Australia's spring and summer months. Whyte considers "light" rather than sunlight to be most important for North American urban spaces, with the exception of the winter months when direct sunlight makes spaces more habitable (Whyte 1980).

This author would argue that due to Brisbane's wide streets and adequate setbacks, sunlight is generally afforded to urban spaces, and particularly to open squares.

In direct sunlight, these spaces are generally uncomfortable (and even dangerous – dehydration and sunburn are common) during the hotter months, and so this factor contributes in a much more significant way to Brisbane's public spaces than Whyte's studies of North American cities.

Towards the end of this site visit, the square's shady and grassed patches appeared to be fully occupied, and no further users seemed to enter the site other than to pass through.

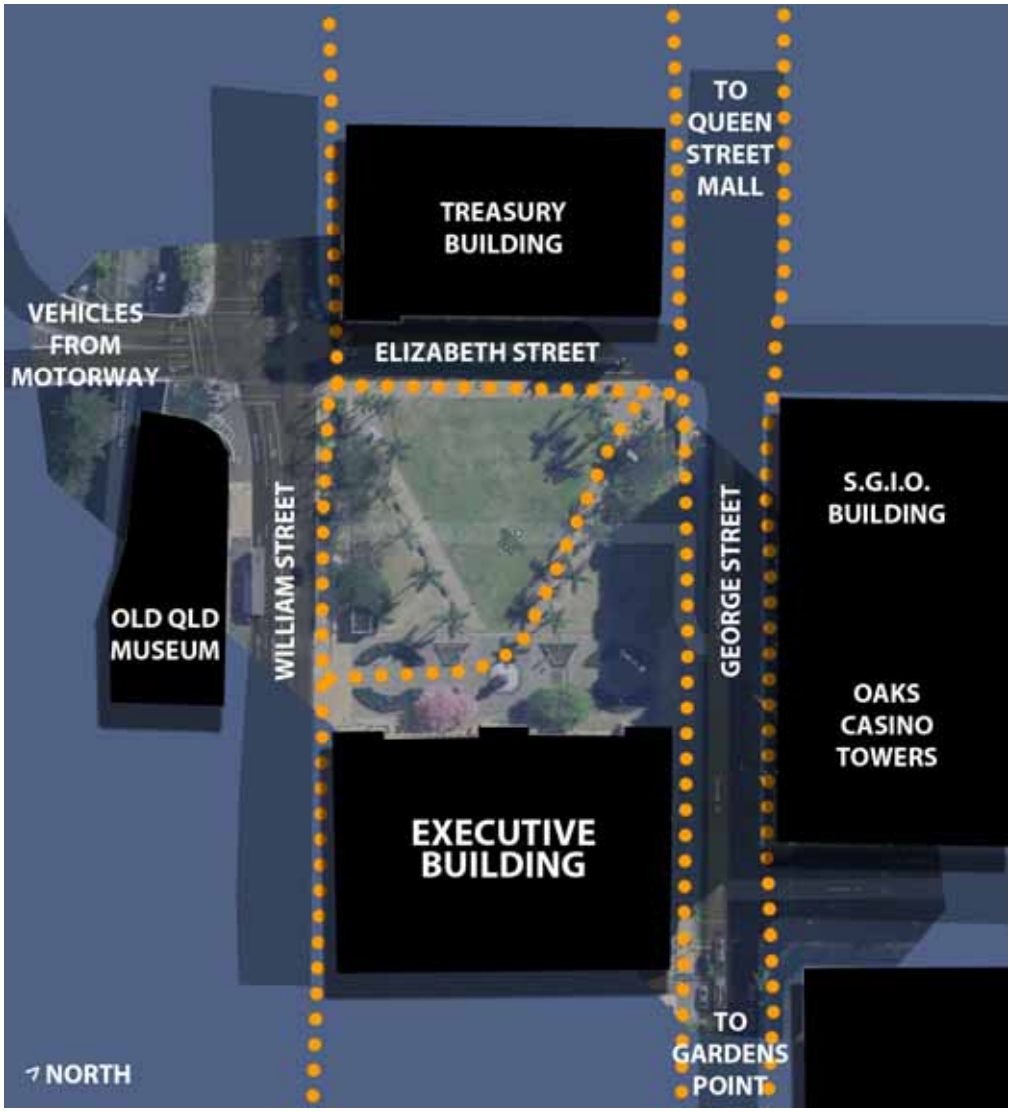

Figure 33 Queens Park Field Study: User Engagement 7:30-8:30pm Tuesday 23 October 2012 (NearMap 2012 & Ridings 2012)

After dark Queens Park was observed to be almost completely deserted, with only the occasional pedestrian cutting through the park.

No optional or social activities were observed in the square during the hour-long site visit.

Particularly after dark, people appeared to be wary of their surroundings and others, particularly if walking alone. This is perhaps a natural response to a dark, deserted urban space due to the perceived danger of what Whyte (1980) terms "undesirables" (i.e. people that may undertake criminal or deviant behaviour).

Unlike King George Square, which was well lit and bustling with activity after dark, Queens Park is quiet, deserted and eerie due to the lack of activity within it and in the surrounding area (except for pedestrians nervously hustling by).

Stage 3: Analyse

Observed user tendencies

Following, based on the previously outlined observations, are the user "tendencies" considered to be most pertinent to Brisbane's local distinctiveness with regard to user engagement with public space:

- As observed at King George Square, travel routes are more direct and hurried during peak hour, but tend to become more "meandering" during lunch times and when users are engaging in more leisurely activities such as sightseeing, shopping or socialising (see Figure 22). This, by its

nature, contributes to users "lingering" longer in the space.

- Users engaging in passive social interactions such as observing others in the space would quite often remain in the space for quite some time. The prevalence of this activity and period it would last was linked to the amount of "prospect", or "people-watching" facilitated by the space. The more there was to see (i.e. the busier the space was), the longer people tended to remain in the space. This is supported by Whyte's (1980) study where he concluded that "*a busy place seems to be the most congenial place to be if you want to be alone*" (Whyte 1980).
- People appeared to be drawn to other gatherings of people and lively nodes of activity. The "activated zone" at King George Square drew in people that were not directly engaging with the businesses but would congregate on the edges of this space.
- Social interactions of groups larger than three or four would tend to form in a circular formation, rather than in a linear arrangement (such as a single bench seat). This resulted in some gatherings being a mix of people sitting on benches and others standing or crouching in front of them in order to have face-to-face conversation, as observed at King George Square.
- Spaces that do not adequately cater for social interactions or optional (leisurely) activities can be left ignored or unnoticed by passers-by. If the space is inconvenient to inhabit (i.e. little shade or nowhere to comfortably sit, as observed at Queens Park) few people tend to utilise it.
- "Open space" (as opposed to "public space") could be described as the space that simply serves indoor space (Greenberg 1990). At Queens Park activities that cannot practically take place indoors, such as speaking on the phone during a break, smoking or simply resting on a bench were commonly observed. These activities, while "optional", are not necessarily leisurely, but a necessary counterpart to indoor working life. In this way, these activities are perhaps verging on "necessary" particularly if the participant has no choice but to undertake the activity (such as taking a private phone call away from the office, out of earshot of colleagues, etc.).
- Spaces can become "full" even when they are not physically (spatially) exhausted. If spaces do not provide adequate places to sit or linger comfortably (in the shade, for instance), potential users are often observed bypassing the space, presumably to seek comfortable space elsewhere. While Whyte (1980) observed a similar tendency, his conclusion was that people can "sense" the correct capacity of a space for the spatial qualities and activities associated with it. In Brisbane, however, this author suspects that the by-passing of the space had little to do with the perceived "capacity" of the site, as the site was not nearly populated enough to convey that it was "full" (see Figure 32). Instead, this author suggests that users are not willing to put up with uncomfortable environments unless there is enough "prospect" to counterweigh their discomfort. For instance, multiple users were observed at King George Square lingering in the full sun and were observed watching others. Whereas at Queens Park, where there was little to watch, no users lingered in the sun, but sought shade, and most often became engrossed in their own, private activity (reading, talking on the phone and so on).

The success of design framework factors

This study has found that primarily people friendly design factors have been utilised in the design of King George Square, with only a few remnants of historical social control design factors remaining. Analysis of Queens Park's current design and its history, on the other hand, has revealed that strong social control factors are evident at that site. Furthermore, the research conducted into the history of this space has revealed that only a portion of these factors are genuinely historical.

Social control: scale, materials, beauty and ornamentation

Factors such as scale, materials, beauty and ornamentation are evident at both sites; however these are generally present in the historical buildings that border the squares. The number of "sightseeing" activities (i.e. tourist photography of the buildings and monuments) that engaged with these elements indicates that they improve the attractiveness of the sites (particularly to tourists) and generate a level of intrigue amongst users.

Vertical organisation is not particularly evident at the sites today, however the historical evidence outlined earlier indicates that this factor was utilised in the original design of King George Square with the use of a grand staircase.

Social control: order and the ruler's intention

Order and the ruler's intention is perhaps the most evident of the social control design factors at Queens Park due to its recent and deliberate incorporation into the square's redesign. This factor, however, is often

ignored by users of the site with people often walking over the lawn to achieve a more direct route (as seen in the mappings of activities in the square). Further to this, the site is often a venue for public protests, both peaceful and violent.

This factor, while discernible in analysing the site, does not have a particularly strong impact on the day-to-day activities that take place on this site, except to constrain them (spacing of benches that discourages socialising, etc.). The strong focus on this one particular design element by the designers has perhaps caused the neglect of other "people friendly" design factors.

People friendly: human scale, shelter and encouragement to linger and converse

People friendly factors are commonly referred to in contemporary design literature today (Alexander 1964; Alexander 1965; Carmona 2003; Crankshaw 2008; Jarvis 1980; Lynch 1960; Tibbalds 2000) and can be observed in many urban sites in Australia.

King George Square seems to incorporate many of these design factors in a deliberate attempt to encourage optional and social activities whilst not inhibiting necessary ones.

Human scale and shelter from the elements appear to be addressed together in the design of King George Square. Many nodes exist for users to sit in sheltered comfort and partially separated from the expansive square.

This research supports the theories outlined by Tibbalds (2000) and Crankshaw (2008) regarding these design factors for human comfort in urban space. The user engagement with these nodes at King George Square was consistent (much of the time benches and other shaded spaces were occupied) and often prolonged (often users would rest in these spaces or even socialise in groups of varying sizes for extended periods).

The encouragement for people to linger and converse at this site went beyond the factors mentioned above. King George Square encourages the formation of groups for social activities by the configuration of benches into clusters allowing people to face each other and converse. The use of bench seats (rather than individual seats) is more flexible enabling varying numbers of people to sit on each bench, rather than a prescribed number.

During the lunch break hours, King George Square's busyness was such that these nodes for groups to gather were in such high demand that some groups needed to configure themselves around a single bench with some seated and others standing or crouching in a small gathering.

In other locations at this site, the distance between benches, presumably intended to form locations for groups to gather and socialise, were spaced too far apart and were not used in conjunction with each other. Rather, they encouraged two groups to gather alongside each other, one at each bench. Being a busy space, the noise generated by the surrounding socialisation and adjacent vehicular traffic meant that the site was too noisy for conversations between people seated at these opposing benches.

Meanwhile, the elements of human scale, shelter and encouragement of conversation are absent in the built form of Queens Park, however they are partially provided by the landscaping. The bench seats at Queens Park are placed symmetrically and evenly spaced establishing a formal and rigid setting. Users tend to use the lawn under the shade of trees for occasional social gathering but the opportunities for this are particularly limited compared to King George Square due to the lawn being patchy in places.

Trees also do not provide a large amount of shade at this site, which further exacerbates the opportunities for people to gather comfortably or for long periods.

People friendly: activation and things to look at and do

The "activating" of King George Square has been a highly palpable change to the square in its recent redevelopment. Previously, the square did not house any particular commercial presence that might actively draw users into the square (Newell 1997; McMahon 2009). The structure built on King George Square houses restaurants and bars that "activate" the square, and draw people into it and the surrounding spaces. This activated zone achieves a lively hub for socialising as well as providing an active "edge" that interfaces with the sprawling open square, providing shelter for year-round activities whilst also affording its users views out to the busy square, the neighbouring historic buildings, the surrounding urban environment and the open sky.

People want things to look at and do, and King George Square offers not only a thoroughfare and open space to urban inhabitants, but also creates a destination for "optional" and "social" activities.

This hub of activities proved to be highly popular with users of the square throughout the day and night. Not only that, but the surrounding spaces, including the previously mentioned nodes for sitting and gathering, also were consistently inhabited. This data suggests that the mere presence of others and their activities (necessary, optional and social) is attractive to other users, either alone or in groups, as it provides a passively social environment (a theory put forward by Gehl 1971 pp. 144).

Gehl (1971) asserts that whilst physical framework, such as that provided at King George Square, doesn't affect social encounters directly, it does provide

possibilities for seeing and hearing other people, and hence provides an environment more receptive to incidental social gathering and interaction (Gehl 1971 pp. 144).

These findings also support Whyte's (1980) claims regarding triangulation. Social activities at King George Square were far more successful than those at Queens Park (based on the frequency, duration and "liveliness" observed in this study) and this success could be partly contributed to the "prospect" seating arrangements provide users at King George Square. Crankshaw (2008) considers the success of public seating to be founded on its ability to provide options for both refuge and prospect (Crankshaw 2008, pp. 162). The prospect afforded by many (if not all) sitting nodes (and particularly "the activated zone") at King George Square allows triangulation to occur. The first author would suggest that this greatly enhances the site's attractiveness to users based on the observed popularity of these spaces for social activities and also the periods of time that users were observed lingering at these locations (Crankshaw 2008, pp. 162).

Queens Park does not provide such an environment. The physical elements themselves almost discourage incidental social interaction with the spacing of bench seats vast, and their arrangement linear and rigid. Not only that, but the bench seats turn their back on the busy pedestrian footpaths that border the site, ignoring the opportunity for leisurely "people-watching" and "prospect" that proved popular at King George Square.

This data shows that the primary use of Queens Park is as a thoroughfare (cutting through from William Street to George Street connecting Gardens Point with Queen Street Mall) and that the small number of users that linger in the space are presumably those seeking respite from the surrounding urban (or working) environment rather than seeking something to "do", such as engaging in a social activity.

This was evident in the way in which people used the space. King George Square was observed as a busy, active space, with many users simply dwelling in the space for what appeared to be "people-watching". Queens Park's users, on the other hand, were observed reading or speaking on the phone. These dissimilar types of activities perhaps indicate that the use of Queens Park by urban inhabitants is for respite, and "necessary" activities rather than recreation or entertainment.

People friendly: permeability, clear space and travel routes

Permeability to both case study locations could be improved. Whilst the edges of the squares addressing the surrounding footpaths are highly permeable, adjacent roads divide the squares from adjoining pedestrian traffic and also activated edges of surrounding buildings.

Queens Park is perhaps most affected by this problem, as a high amount of pedestrian traffic was recorded on the footpaths but little actually penetrated the square, and furthermore, much of the traffic was on the opposite side of the road (particularly George Street which acts as a pedestrian link between Gardens Point and Queen Street Mall).

Whilst King George Square's relationship to the surrounding "mall" spaces is better, and it itself provides a pedestrian link between Queen Street Mall and surrounding areas, its permeability is still not ideal.

The pedestrian traffic that flows through the heart of King George Square is constant and substantial. This factor alone contributes to much of the success of the site as an activated and social space, however the pedestrian traffic is noticeably "tidal". This "tide" is caused by the constant cycle of traffic lights at either side of the square which creates an ebb and flow of pedestrians travelling between Queen Street Mall and the Roma Street precinct and public transport hubs.

This ebb and flow is not particularly problematic in itself, however it does contribute to a certain "urgency" that is visible in the speed and route taken by pedestrians through the space at peak times. This urgency also appears to be contagious, as much of the users appear to take on the direct route and hasty pace of surrounding users. This urgency and pace, whist contributing to a more efficient facilitation of Gehl's "necessary" activities (Gehl 1971, pp. 143), does not encourage or stimulate social encounters or optional, leisurely activities.

During the morning, peak hour rush, the pedestrian traffic through the square was observed as very direct and hurried, whereas the lunchtime traffic was considerably slower and even meandering. This meandering was perhaps a consequence of groups of people congregating in various locations in the centre of the square and also the stopping and starting of tourists taking photos of the monuments and the City Hall façade (noted earlier in the mappings as "sightseeing activities").

This author would suggest that it is perhaps also a by-product of a more relaxed and social atmosphere observed at lunchtime, where more users are engaging in optional (leisurely) and social activities.

A more permeable square would perhaps reduce the "urgency" and direct line of travel that pedestrians currently assume, and potentially could create a more relaxed, social and "meandering" atmosphere for an increased period of time during the day.

Both King George Square and Queens Park are particularly successful at providing uncluttered public spaces and this also provides a number of other benefits with regard to people friendly design.

The uncluttered space at both sites provides generally undivided space, which allows the spaces to be flexible for many types and scales of activities and events, as well as facilitating sight lines and connections to various surrounding precincts and points of interest, such as historical buildings and landmarks. This not only provides a generally picturesque backdrop to the spaces themselves, but assists in the legibility of the city and encourages (to a certain extent) further exploration of the surrounding urban environment.

As previously mentioned, however, the intended use of Queens Park has become unclear in the recent redevelopment of the site. Whilst the lawn (at least in an urban context) would suggest that it's intended use is for picnicking and leisurely activities, the surrounding physical elements of the site are rigid and antisocial. This results in a particularly unclear message to potential users regarding what "acceptable" uses of the space are.

A consequence of the previously mentioned "order" and "ruler's intention" design factors observed at Queens Park also contribute to a minor hindrance to its "openness" due to the formalisation of the paved pathways and their small kerbs that define them. These kerbs have the potential to limit access to the open lawn (i.e. for persons with disabilities) and may provide a trip hazard.

Whilst neither site particularly provides a defined network of travel routes (although Queens Park comes close), the few junctions of travel paths, such as the location of the statue of Queen Victoria at Queens Park, are not celebrated as a moment for social interaction. The converging routes described by Tibbalds (2000) have the unlocked potential to be the location for interesting and social spaces (Tibbalds 2000, pp. 57-58).

DISCUSSION

Limitations

This research gauges public engagement within case study sites. The findings of this research are specific to Brisbane, Australia at the time this research has been undertaken. While the research findings will be of benefit to the wider understanding of urban design outside Brisbane and into the future, the particular cultural, social, political, technological and climatic energies upon which the research is based will differ in other places and times.

It is also acknowledged that there are topical limitations to this study. Primarily that whilst a few prominent design frameworks have been identified and various design factors have been interrogated in detail, there are obviously many other design strategies and frameworks of design factors that are utilised in contemporary urban design, as well as historically. Further research is required to outline the ways in which these frameworks may have influenced and might improve Brisbane's public spaces.

Climatic factors have influenced this study's results. While this influence is of great interest to the first author in ascertaining Brisbane's local distinctiveness as a sub-tropical urban centre, further studies are required to ascertain the influences at different times of year. This research was conducted during Spring, and thus findings determined during other seasons may uncover further, or different conclusions.

Additionally, assumptions have been made regarding the observations recorded. Whilst the actions of users have been recorded, their motivations and satisfaction regarding each site and the design factors contained within them have been assumed based on the period of time users lingered in the space.

Brisbane and social control

Roeck's (2004) social control design factors were evident in the historical elements of both sites.

What was unexpected, however, was that some of the social control factors have been added in more recent redevelopments of Queens Park. These design intentions have markedly increased the "control" of the users through the use of order.

The recent Queens Park redevelopment did not follow more contemporary design strategies seen in King George Square and the people friendly design framework factors described previously, but appears to have responded deliberately and literally to the formal, historical buildings that surround it.

The well-defined and geometric path ways are not only defined by kerbs and benches to reinforce a sense of "requirement" to use them, but they also position users to view the imposing statues and the grand façade of the Executive Building. These elements of "order" and "the ruler's intention" bear strong resemblance to those Roeck (2004) describes; for instance his assertion that "*the straight line displayed power*" (Roeck 2004, pp. 138).

The legitimisation of the power held by governing bodies (in this case perhaps the authorities, the monarchy or the owners of the land) is often manifested in symmetry and geometry in physical urban elements (Roeck 2004, pp. 138). The geometrical paths are literally directing the users of the space towards the references of powerful and historical elements and entities, e.g. Queen Victoria, former Premier TJ Ryan and the servicemen and servicewomen of WWI and WWII.

These design elements create a particularly rigid space with edges that are unfriendly (busy roadways) and imposing (tall, grand, historical buildings with no reference to human scale).

The space does, however provide respite from urban life with the rare provision of an open lawn. The poor quality of this lawn (in places) and the lack of shade means that for most of the day the lawn acts only as open space serving the surrounding historical monuments (i.e. not blocking their view or competing with their presence). Roeck (2004) speaks about this design strategy in terms of a neighbouring property remaining smaller than a landlord's estate in order to magnify the estate's relative scale (and perceived importance).

The focus on this "formality" and reverence to the various monuments on the site appears to have overlooked the very real problems of climate, user comfort and accommodation of social activities.

The contemporary requirements and expectations of public space are that general socialisation and leisurely activities will be accommodated by public spaces. This site, though, appears to address only aesthetic and geometric patterns (similar to the compositional and art-centric designs described by Sitte (1965) and Gibberd (1953) at the outset of this paper), rather than social ones.

The space therefore seems to be highly successful in preserving a sense of history (albeit a slightly inaccurate account, with regard to the original layout and inhabitants of the site), and also a place for people to break from the urban, working environment (with the exception of the unimpeded traffic noise).

The site appears to feebly respond to the needs of individuals, or very small groups, who are looking to remove themselves from the urban bustle, and focus inwardly to a "serene" (although noisy) open space.

It is thus unsuccessful in addressing many of the optional and social activities observed at King George Square.

Brisbane and socialisation

This research revealed that whilst Queens Park offers a rare opportunity for urban inhabitants to stretch out on an expanse of lawn, it was largely ignored by passers-by. This author would argue that this is due to two problems, the first being the design flaws already mentioned, such as the exposure to noisy vehicular traffic and the lack of shade, but more pertinently, that Brisbane users of public space appear to seek out things to look at and do, particularly social "prospect".

Prospect has been used in this paper to describe the user being in contact with others by seeing and hearing them.

At King George Square, even when the provided seating was exhausted, people were still being drawn into the square, even standing in the open, in full sun; simply, it appeared, to be seen and to see others. In other words, groups of people were happy to stand and even dwell in the sun in order to be in the proximity of their social companions but also total strangers.

As this paper has consistently argued, people friendly design factors are very important, and they greatly impact on the comfort and activation of King George Square. The benefits of these factors, however, appear to extend beyond those enjoyed by users engaging with them directly.

Users enjoying and observing the square collectively created a social "mass" which this author considers to be a congregation of the general public, going about their individual activities (both active and passive) but together forming a dynamic and engaging atmosphere that draws others in.

This activated area becomes a destination in itself.

Within this congregation of strangers, there is an observed mutual "watching" that provides the basis for passive observation and also triangulation, serving the active socialisation that takes place there.

The data shows that while it is ultimately the people that create the activation and appeal of a public space, the underlying people friendly design factors instigate the gathering of people and are integral to encouraging prolonged engagement with the space.

The comparison between Queens Park and King George Square shows that whilst a space may be big enough to house large groups of people, in order for people to be drawn into the space initially, the elements of the space must accommodate and engage their users.

CONCLUSION

The designing of urban public space is complex and multi-faceted, considering not only physical design factors within the site, but responding to the various social, cultural, contextual and historical influences of a city.

The influences do, however, contribute to locally distinctive public spaces if they are carefully considered. This research has outlined various design strategies that have been documented and implemented in public spaces in various locations across the globe.

The results of this research indicate that whilst particular design frameworks may have been implemented historically, the changing populations, technologies, social and cultural attitudes and user requirements of public spaces need to be considered. The successes and failures of Brisbane's public squares have been identified and contemplated as products of the design factors employed at each of the locations.

The findings confirm that many of the well-established design factors outlined in existing literature are present and effective in creating social and engaging public spaces in Brisbane, but also reveal that not all factors equally contribute to the successful outcomes.

Existing literature extensively outlines various design factors that can contribute to successful public spaces but this research has now tested them in the local context, providing evidence of their successes and failures.

More research is required to fully explore the ways in which public spaces in Brisbane can be improved beyond the current successes observed, and into the future.

Further analysis of these sites should also be conducted in order to gain a more thorough and comprehensive picture of the ways in which the spaces are used throughout the week (including weekends), and year.

This research furthers the existing knowledge regarding urban design in Australia, and in particular, Brisbane. It provides the basis for further discussions regarding what public space in Brisbane should cater for, and how it should contribute to the urban context. It provides the beginnings of a locally distinctive framework for urban design in Brisbane.

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